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The academic and physical development plans of the University of California at San Diego are outlined. Facilities for 27,500 anticipated students are divided into twelve colleges of about 2300 students each. The twelve colleges are arranged into three clusters of four each, grouped around the central academic and administrative facilities, in accordance with the main concept of locating all high usage facilities within easy walking distance of each other. The campus circulation patterns are based upon pedestrian traffic; vehicular traffic is completely separate, and provision is made for perimeter circulation and parking. Specific areas described and illustrated include landscaping, grading, circulation and parking, land and building use, the surrounding community, stages of plan implementation, architecture, and special features. Layout sketches are provided showing plans for heating and cooling distribution, electrical distribution, and water, sewage, drainage and gas systems. Information relative to particular facility and building use is tabulated. A large map shows the overall long range development plan. (HH)

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Long Range Development Plan

UNIVERSITY OF CALIFORNIA, SAN DIEGO,

OCTOBER 1963

EF 001 966

Prepared by the Consulting Architect & Planner, ROBERT E. ALEXANDER, F.A.I.A. AND ASSOCIATES
Under the Auspices of the Campus Planning Committee, CHANCELLOR HERBERT YORK, *Chairman*
Assisted by the Office of Architects & Engineers, J. W. TIPPETTS, *Building Program Coordinator*

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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San Diego: Office of the Chancellor
October, 1963

PRESIDENT KERR

As chairman of the Campus Planning Committee, I take pleasure in forwarding to you the Long Range Development Plan for the San Diego campus. The academic master plan for the campus was accepted in principle by The Regents on February 15, 1963. Concurrent with refinement of the academic master plan during the past 18 months, work has proceeded on the development of a physical long range development plan which would express and make possible the concepts contained in the academic master plan.

The primary responsibility for this planning has rested with Robert E. Alexander, F.A.I.A., consulting architect and master planner for the San Diego campus. He is the author of this report, and has worked closely with the Campus Planning Committee and the Office of Architects and Engineers, who have reviewed it during the various stages of development. In the generation of this comprehensive plan, consideration has been given to every aspect of campus development, including site, climate, architecture, landscaping, roads and parking, utilities, recreation and playfields, and student housing.

The long range development plan was presented to The Regents at their meeting on the San Diego campus on February 14, 1963, and was enthusiastically received.

It is also recognized that planning is not a static process, and that, as time passes, changes in the plan will be required. This is not only necessary but desirable, and the value and success of a plan of this type should be judged, in part, by its ability to accommodate the changes that new ideas will require, while, at the same time, still preserving its basic concepts.

I believe that this plan meets all of our requirements and wishes imaginatively and effectively, and I therefore recommend that it be presented to The Regents for adoption in principle.

HERBERT YORK

Foreword

This plan and report have been prepared by Robert E. Alexander, F.A.I.A. and Associates under a master planning agreement with The Regents. Results of this planning effort, which was assisted by the San Diego Campus Office of Architects and Engineers, and by the University Statewide office, were reviewed each month by the San Diego Campus Planning Committee which formed or endorsed the policy recommendations of the plan. Seldom has an architect of a new campus been favored by such a helpful university staff, both local and statewide, and stimulated by such an enthusiastic faculty and administration. Even more remarkable are the enlightened and sophisticated planning policies of the President and The Regents and their personal devoted interest which have contributed decisively to the results.

Twelve months after the start of work, the plan was presented to The Regents in February 1963 and was received enthusiastically. Approval, however, was withheld pending satisfactory definition of the terms of transfer of 456 acres from the City of San Diego to the University, approved in October 1963. This process resulted in the modification and definition of roads around the campus, and changes in land use in the Community Plan. The traffic consultant also made proposals which resulted in some changes in the campus road system.

The only major change in the road alignment moved New Miramar Road east of the freeway to the south boundary of the campus, so that the east married student apartment area is not separated from the balance of the campus by a major thoroughfare. At the same time, space for a primary school was reserved adjacent to this area, Genesee Avenue at the northeast boundary of the campus was moved south to recognize the topography, and East Gate Mall was developed as an entrance to the campus from the east.

The most significant land use change provides for a commercial town center in the valley south of the campus, rather than on the Camp Matthews plateau or at the southeast corner of the site. 30 acres adjoining the northwest corner of the campus was changed from recreational use to selected research, excluding manufacturing. The residential holding capacity was increased by adding to some multiple residential area close to the campus and by changing some areas previously designated as "open space" to residential use.

These changes, none of which affects the basic plan concept, have been incorporated in the black and white map folded in the rear cover. No change has been made in other graphic material. As a guide to development, the plan has been designed to absorb such revisions and even more drastic ones on a continuing basis.

State of the Campus-1963

In the fall of 1963, thanks to the head start provided by the School of Science and Engineering, which has since been designated The First College, UCSD is already in operation on the new campus. Building A provides high temperature hot water and chilled water for air conditioning, and contains the central telephone exchange. Building B, a seven-story graduate laboratory and office building, is occupied by administrative offices as well as faculty and graduate research activities. Building C, a five-story laboratory building, is occupied by the Physics and Chemistry departments. Building D, a four-story Biology and Chemistry laboratory building, is under construction and the structure is virtually complete. Building E, which will house the University Library for several years, as well as Social Science and Humanities classrooms, is under construction. Contracts will be let early in 1964 for the first Residence Halls and the General Services and Cafeteria Building, which will serve as a student center. The construction of Building F, to provide under-graduate laboratories, expected to begin in July, 1964, will complete the physical facilities for The First College, accommodating about 2500 students anticipated in 1968.

In the fall of 1963, 280 graduate students were enrolled in the School of Science and Engineering. To the distinguished Science and Engineering faculty, ten professors in the Humanities and Social Sciences had been added, and classes were offered for the first time in Philosophy.

The unanticipated number of requests for admission by highschool seniors, coupled with the advanced state of readiness at UCSD, has led to a change in tentative plans. Instead of admitting 75 juniors or seniors in 1965, UCSD will probably welcome 150 or more freshmen in 1964. It is planned that they will be channeled into a one-year sequence of mathematics, science, humanities, and modern foreign language courses, and that the first under-graduate majors will be in Biology, Chemistry, Earth Science, English, Philosophy, Physics, and Mathematics.

A Dean of the School of Medicine was appointed in October, and advance planning for this important element of UCSD is well under way. Thus the San Diego Campus is an active operating institution, prepared to fulfill its role in the expanding University system on schedule, providing the voters of the State continue to support the development of their human resources through higher education.

Contents

SUMMARY / 1

I HISTORY / 2

II PROGRAM / 5

III SITE / 10

IV CONCEPT / 12

V LONG RANGE DEVELOPMENT PLAN / 16

1. Landscape /16
2. Grading / 19
3. Circulation and Parking / 19
4. Use of Land and Buildings / 21
5. Utilities and Services / 23
6. The Community / 25
7. Stages / 26
8. Architecture / 28
9. Features / 32

APPENDICES / 36

This document contains many charts and diagrams which may not be legible in reproduction. In spite of this fact we feel the total document to be of sufficient importance to reproduce.

Illustrations

Model of Long Range Development Plan / viii
Pueblo Lands Map, 1870 / 2
Scripps Institution of Oceanography, 1912 / 4
The Site / 9
Map of the Region / 10
Area Analyses / 12
Plan Concept / 13
Walking Time / 14
Landscape Plan / 17
Circulation & Parking / 18
Use of Land & Buildings / 20
Recreation / 21
Community Plan / 24
Community Features / 25
Stages of Growth / 26
College Types / 29
General Campus from East of Freeway / 31
Central Views / 32
Communications Tower / 35
Comparison of University Plans at Same Scale / 40
Approximate Basic Grades / 42
Heating and Cooling Distribution / 45
Electrical Distribution / 46
Systematic Layout of Water System / 47
Systematic Layout of Sewer System / 48
Systematic Layout of Drainage System / 49
Systematic Layout of Gas System / 50
*Long Range Development Plan in Rear Cover Pocket

Tables

Faculty and Student Body / 36
Faculty Strength by Campuswide Graduate Department in 1975 / 36
Space Estimated for "Typical" College UCSD / 37
Summary of Space Estimates—Total UCSD / 38
Assumptions / 38
UCSD Available Land / 39
Estimate of Land Requirements / 39
Automobile Parking / 43
Estimate of Athletic & Recreational Facilities / 43
Land Use—UCSD / 44
UCSD Academic A.S.F. Required to Satisfy Estimated Growth / 51
Assignable Square Feet Required to be Scheduled for Academic Uses to Satisfy Estimated Growth / 52
List of Buildings and Architects / 52
Buildings to be Demolished / 53
Campus Planning Committee / 53
Consultants / 53

Summary

The unique Academic Plan of UCSD proposes to subdivide 27,500 students into twelve colleges of about 2300 students each. Each college is to administer undergraduate education strong in the humanities, social sciences, natural sciences, and technology, and will offer graduate courses administered by centralized departments. A student will be able to take at least two thirds of his curriculum in the college in which he is enrolled and not more than one third in adjacent colleges. Four colleges, varying in emphasis, will offer practically the full curriculum of the University.

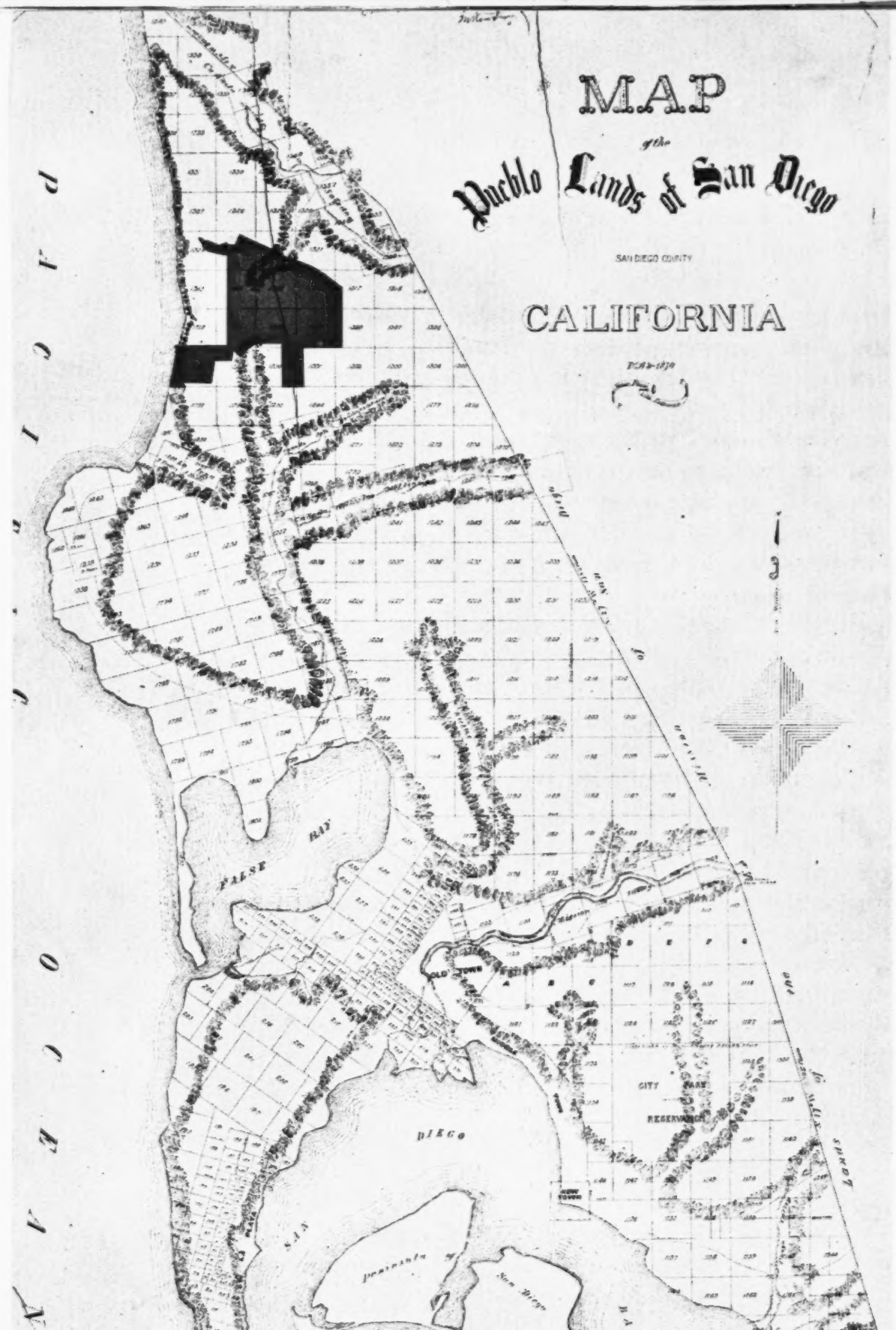
The Long Range Development Plan arranges twelve colleges in three clusters of four each, grouped around central facilities referred to as a communications center. Each college will contain residence and dining halls, a reading room, and informal playfields supplemented by an intramural gymnasium for each cluster. An athletic area adjacent to the academic area will serve intercollegiate sports.

Academic areas will be concentrated west of the San Diego Freeway, which will take the major traffic from Highway 101 in 1967. Highway 101 will then be diverted westward to become La Jolla Scenic Drive, forming the west boundary of the campus. Construction of Genesee Avenue and New Miramar Road will complete the perimeter circulation of the campus, providing a 640 acre area and a 220 acre area free from through traffic.

Each college, reflecting its distinctive academic character, will have a form of its own. Four architectural types are suggested as examples: an open plan, a cube plan, a tower plan, and a cloister plan. A major north-south "Champs Élysées" on the ridge now occupied by Highway 101 and an east-west promenade are proposed to tie the colleges together with uniform paving, tree planting, light fixtures, benches, and other "campus furniture." Stepping off the main circulation into a college plaza, one will encounter a different paving texture and color, distinctive flowering trees, and light fixtures. Thus these college courts may be thought of as twelve jewels strung together on a necklace of promenades.

Major features include a monumental sculptured communication tower at the center of the campus and smaller specialized towers to mark the centers of the three clusters of colleges. A terraced spray pond will provide chilled water and create an exciting spectacle at the Scenic Drive entrance to the campus. The plan envisions an aerial tramway from the beach level to the upper campus, locations for a future mass rapid transit station, and a helistop. A conference center is proposed south of the city golf course overlooking the Pacific Ocean.

Economy and flexibility are inherent in the growth plan which develops one college at a time progressively from south to north. Thus when one third of the plan is developed by 1975, only a small portion of the site will have been committed, and radical changes in subsequent development can be made without undue loss. The first college, to be completed by 1968, is under construction, and the first buildings were occupied in the fall of 1963.



I. History

Countless thousands of University of California, San Diego students in the future will occupy a site rich in California prehistory and history. The Radio Carbon Dating Laboratory at Scripps has verified that human beings enjoyed the site over 7,000 years ago. Cabrillo's discovery of San Diego harbor fifty years after Columbus discovered America, and Junipero Serra's founding of the first Upper California Mission at San Diego seven years before the signing of our Declaration of Independence, established a Spanish tradition. The 1870 survey of pueblo land, some of which is still owned by the City, shows a prominent trail probably used by the earliest explorers up Rose Canyon, across the University site, and down Sorrento Canyon. El Camino Real (The Royal Highway) is proposed to become the major pedestrian way on the new general campus.

In 1904, E. W. Scripps, founder of the newspaper chain, established a center for the study of the ocean in La Jolla Cove. The proximity to shore of deep sub-marine trenches brought ocean life close enough for exploration by row boat. In 1912, the Scripps Institution of Oceanography and its 170-acre site were offered to the University. The Regents accepted the offer and received several successive donations of funds from the Scripps family. The Institution has grown in size and prestige, assembling a distinguished faculty and becoming one of the world's major centers for oceanographic research.

In the late 1950's, a small group of citizens sought the establishment of a top level scientific institution to strengthen the community's emerging research and development industry. Under the leadership of Dr. Roger Revelle, Director of Scripps Institution of Oceanography, the Graduate School of Science and Engineering was established in 1960 on the Scripps cam-

PARKING

SCRIPPS HOSPITAL

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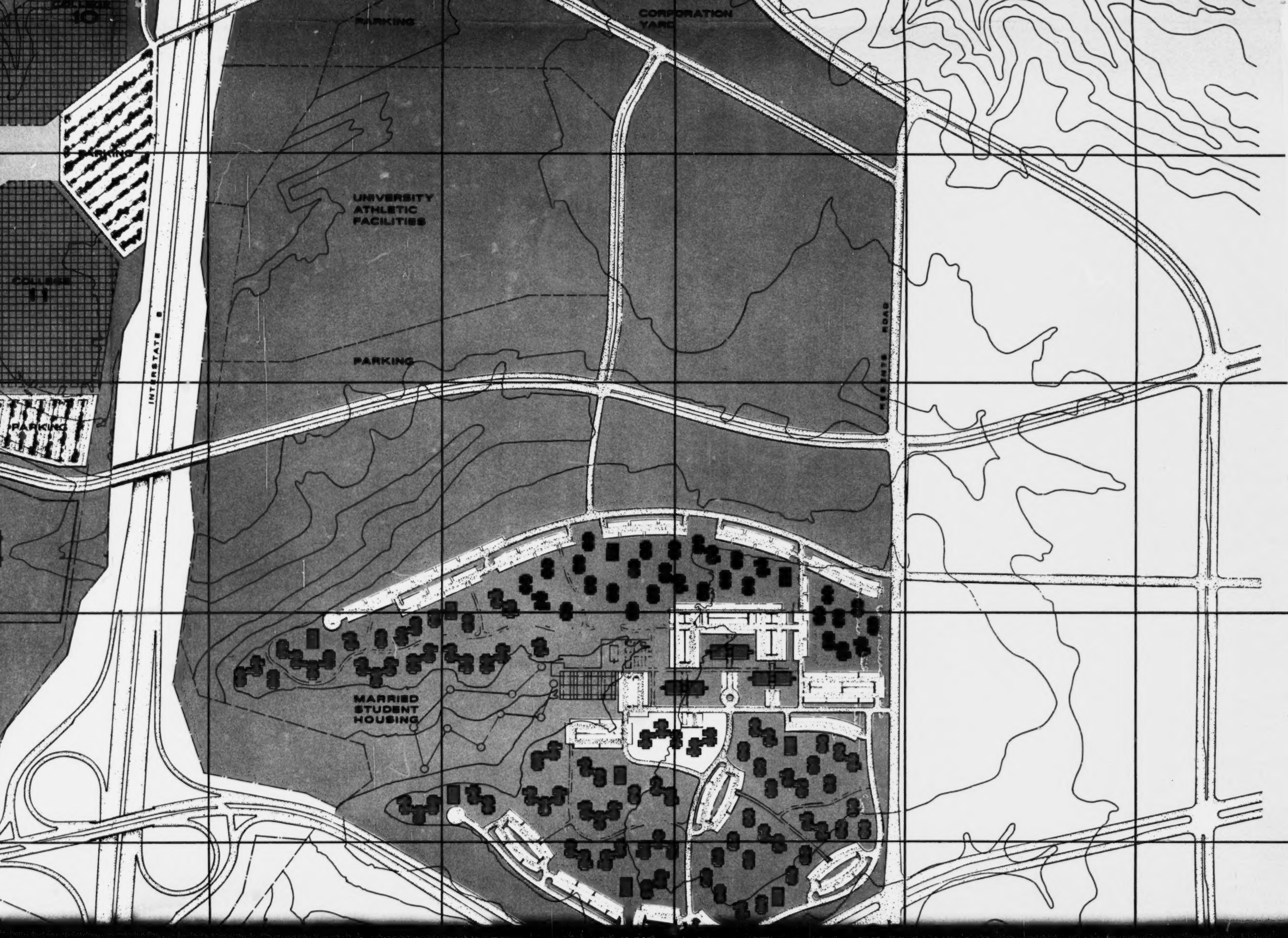
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GRAPHIC SCALE

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A. QUINCY JONES, FAIA · FREDERICK E. EMMONS, AIA

ARCHITECTS & SITE PLANNERS

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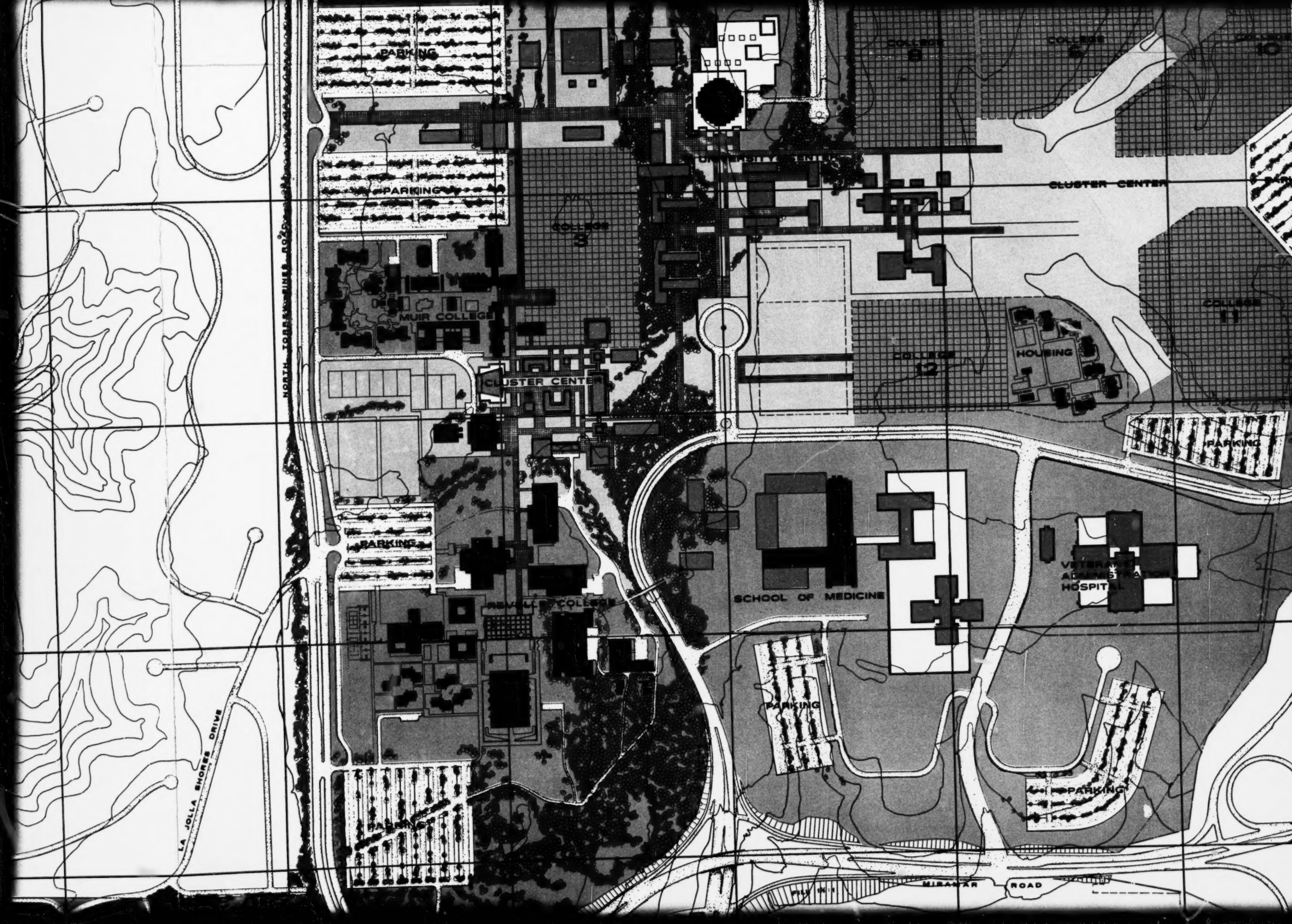
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REVELLE COLLEGE
SCHOOL OF MEDICINE
VETERANS ADMINISTRATION HOSPITAL
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NORTH TORREY PINES ROAD
LA JOLLA SHORES DRIVE
MIRAMAR ROAD

DEVELOPMENT PLAN

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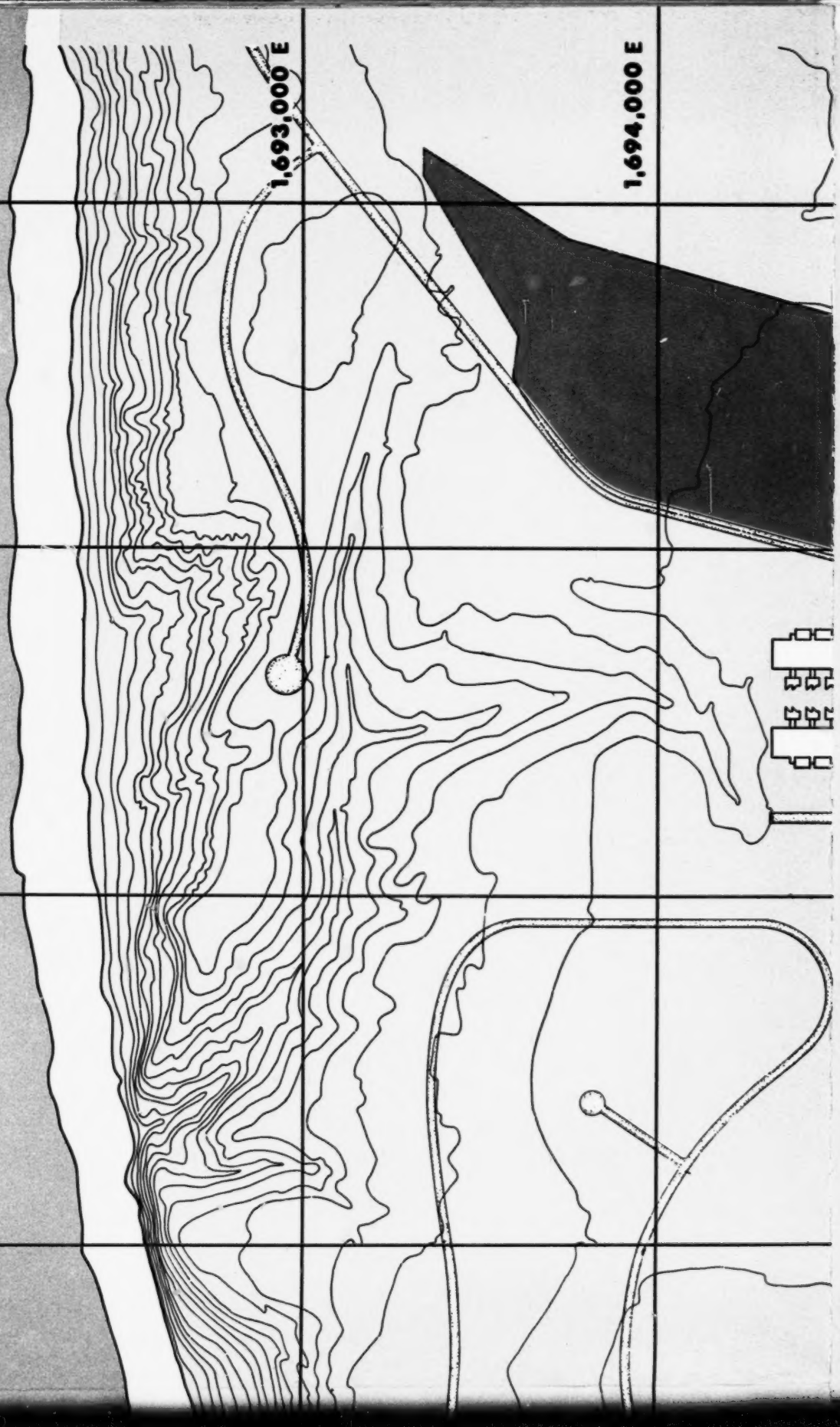

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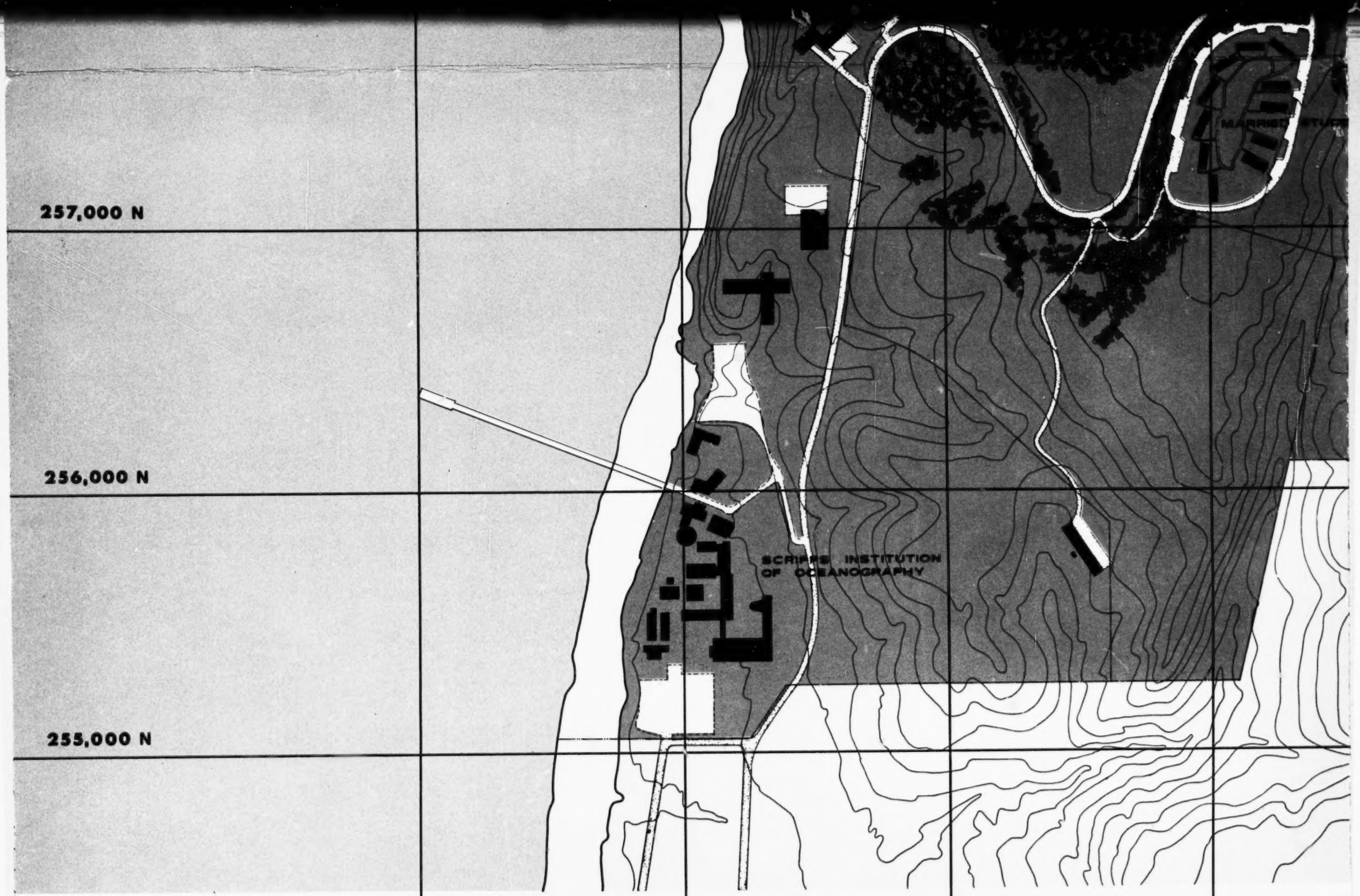

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pus. State appropriations, a donation from General Dynamics Corporation and the City gift of 63 acres of pueblo land southwest of the intersection of Highway 101 and Miramar Road led to plans prepared for the new school by Risley and Gould, Architects. Now partly completed and occupied, this expansion has become the keystone for the new general campus.

In 1957, a "Study of the Need for Additional Centers of Public Higher Education in California," presented by The Regents and the State Board of Education to the Legislature, recommended additional University campuses and identified the need for one in the southernmost portion of the State. The Regents implemented these recommendations in 1958 by authorizing Pereira and Luckman to make site selection studies, resulting in designating a location near the Scripps Institution of Oceanography, providing that a contiguous area of about 1,000 acres could be obtained as a gift, and providing "that a Master Plan of Land Use in the area can give assurance of necessary housing and community development for service and convenience of a large campus." The City Planning Department prepared such a plan, entitled "City of San Diego University Community Study." In November 1958, the people of San Diego voted to transfer to the University 450 acres of pueblo land adjacent to Camp Matthews, an area of similar size about to be released by the Marine Corps. The Regents approved the Community Development Plan in 1959, and a revised community plan, dated November 8, 1961. In 1962, the President of the United States signed a bill committing the transfer to the University of about 436 acres, the Camp Matthews site, which completed the basic land requirements of 1000 acres required to establish a general campus. Both transactions provide that the land must be used for educational purposes and that land may be traded to attain educational objectives. The approved plan assumes relocation of roads to the perimeter of the general campus site.

Contemplating the possibility of developing the School of Science and Engineering as one element of a potential general campus at San Diego, Dr. Revelle described in rough outline an academic plan subdividing a large campus into small partial universities or schools of graduate study with undergraduates playing secondary roles. In October 1959, Risley and Gould, Supervising Architects of the School of Science and Engineering, illustrated this concept schematically to the Campus Planning Committee. The Committee had been meeting regularly since 1957, assisted and advised by J. W. Tippetts, Building Program Coordinator of UCSD, and by R. J. Evans, University Architect.

A master plan for the school and plans for the first four buildings were prepared by Risley and Gould, approved by the Regents in March, 1960 and ground was broken in May, 1961, the first buildings being occupied in 1963. Three of these are graduate laboratory and office buildings.

The completion by 1967 of a library, humanities and social sciences building, an undergraduate laboratory building, a general services and cafeteria building, and residence halls for 800 students will round out the development of the School of Science and Engineering, which will become the first college of the general campus.

In 1961, Chancellor Herbert York took office and the firm of Robert E. Alexander, FAIA and Associates was appointed to prepare the Long Range Development Plan for the general campus and to serve as the consulting architect. Planning for facilities began in February, 1962, based on a report by the Chancellor's Advisory Committee on Humanities and Social Sciences and on earlier informal papers. Basic physical planning concepts were not changed substantially by the Academic Plan prepared by the Faculty under the Chancellor's direction and presented to The Regents in May, 1962, nor by the modified plan accepted by them in February, 1963. The concept called for several par-

tial universities, each having depth in the humanities, social sciences, natural sciences, and technology.

The Long Range Development Plan for the portion of the campus occupied by Scripps Institution of Oceanography was approved by The Regents in June, 1962, and the plan for the general campus was presented formally to the Grounds and Building Committee of The Regents February 14, 1963. Following the policy of The Regents, this plan is subject to review and periodic amendment, as academic, physical, and fiscal conditions and needs may warrant, in order to assure its constant correlation with the campus Academic Plan and the campus long range project priority list. It is intended that the Long Range Development Plan be reviewed annually by the Campus Planning Committee, the Chief Campus Officer, the Vice President-Business, the President, and by the Committee on Grounds and Buildings of The Regents. This policy, calling for annual review and for a re-examination in detail and republication once every five years, transforms a static plan into a dynamic planning process.

SCRIPPS INSTITUTION OF OCEANOGRAPHY, 1912

(Historical Collection Title Insurance & Trust Co., Union Title Office, San Diego, California.)

II. Program

1. ACADEMIC

Public universities in large growing states such as California tend to become very large. Even after raising entrance requirements to admit only the top 12% of secondary school graduating classes, and anticipating close to 40% graduate students, it is estimated that 130,000 students will be eligible and will wish to enroll in the University of California by 1975, and that by the turn of the century this figure might double. To provide for this growth, The Regents established a policy maximum of 27,500 students for any one University of California campus, and commenced planning for three new general campuses of this capacity, supplementing Berkeley and UCLA which will soon reach the maximum, and four other existing campuses planned for somewhat smaller enrollments.

Such a large university campus offers many advantages. It can support a very large library. The number and diversity of faculty members is large. On the other hand it tends to be impersonal, since the members of a 5000-student entering class can hardly know one another, much less know all the faculty. A professor tends to know only a limited number of his colleagues, and to know hardly anyone outside his specialty. Various plans have been devised to try to offer the advantages of a small organization within the framework of a very large one.

As early as October 20, 1955, Dr. Stephen C. Pepper wrote to President Clark Kerr, "It seems that a plan should be discoverable by which the benefits of a large university with its superior laboratory and library facilities, and the eminence of its faculty, could be combined with the advantages of a small college with its compact student group, and opportunities for fellowship, mutuality of interest and of study program, and *esprit de corps*. With house units organized into colleges, such a plan appeared realizable."

At San Diego, faculty studies initiated in 1959 were continued under Chancellor York with the assistance of Statewide committees and the Academic Senate and culminated in the Academic Plan approved by The Regents, February, 1963. This plan should not be confused with the English residential college system. In the latter, a student reads, writes, talks, eats, and sleeps in his college, but goes to central facilities for principal lectures, laboratories, and libraries. The UCSD plan is unique as far as we know. Each college would be a partially complete university, described in the Academic Plan as follows:

Form of the College Plan in 1975 (Guidelines):

The present study attempts a visualization, as concrete as possible, of the college structure as it might be in 1975, when the campus will have reached 9200 students, one-third its ultimate size.

1. The colleges must be small enough to avoid the impersonal character of the large centralized universities.
2. Each college is to have an individual character of its own.
3. Each college is to constitute a meaningful and fairly self-contained educational entity, supplying perhaps two-thirds of the educational and social requirements of its undergraduate students.
4. Research institutes and graduate schools are, in general, to be associated with a single college, but participation by members of other colleges would be regarded as entirely normal.
5. The organization of the faculty follows the general plan of Part I.
6. Teaching loads and administration duties of the faculty must not significantly exceed those of a centrally organized campus.
7. The organization must be such that, in general, each student and faculty member finds himself in the spot in which he wants to be.
8. The 1975 plan must allow for natural subsequent development until the ultimate student body size is reached.

From these assumptions follow these principles:

1. Weak and service departments must be avoided. Rather than have a weak department, a college should rely on another college in which this department exists in strength.
2. Each college must have strong activities in parts of the natural sciences, social sciences and humanities.
3. Each college must have its own characteristic orientation in each of these three areas.
4. The campus as a whole should have a character of its own. Natural, distinctive features are emphasis on science—in particular, ocean, space and biological sciences; Latin America and the Orient; the arts.

Phasing of the Plan

Colleges would be built up, one at a time, until they reach full size, or nearly full size, at which time the next college in line would be established. Thus from now until 1968, there will be only one college. In 1968, fission of that college will occur with the creation of a second, adjacent to it. A second fission will occur around 1971, and the third, producing the four colleges discussed in the remainder of this section, would occur in 1975. Since the first fission of one college (the present SS&E) into two colleges will not take place until 1968, the final details with respect to how such a fission would occur need not be worked out in detail at this time. The detailed description (Appendix 36), therefore, should be considered as one example of how it might be done rather than as a concrete plan.

2. PLANNING

The consultant translated the Academic Program into a space program based in a distribution of subject fields and student levels enrolled at Berkeley, in the fields anticipated in a simplified program at UCSD. "Restudy Standards" of the State of California were applied to produce an estimate of space requirements for a typical college. (Appendix 37). The most significant factor that emerged from this study was that out of almost one-half million gross square feet of academic space serving a college of 2300 students, 70% is laboratory space. This space is so substantial that it can be decentralized in colleges economically. This does not result from over-emphasis of science and technology. More than 45% of the students are assumed to be enrolled in the humanities, social sciences, and fine arts, yet only 10% of the space is required for classrooms. An additional 10% is required for offices and 10% for shops, etc. This fact accounts for the predominance of wide buildings, and consequently a heavy "texture" of the plan. Furthermore, because 60% of the space is devoted to research laboratories and offices, more than half the academic space can be on upper floors, served by elevators, without reference to the class break time.

Space for residence halls for 800 students, cafeteria, and general services bring the estimated master planning area for a typical college to 700,000 gross square feet. In addition to twelve such colleges, space was added for central libraries, physical education, auditorium, general administration, corporation yard, and graduate student apartments. Including 1,000,000 square feet for the basic College of Medicine, space requirements total almost 12,000,000 gross square feet. (Appendix 38). It became obvious that almost 300 acres of floor area required on the ultimate campus should be designed in multi-story structures.

Physical Planning Objectives and Principles:

OBJECTIVES

a. To accommodate 27,500 students in a physical plan which promotes the objectives of the Academic Plan of the University of California, San Diego.

b. To develop a beautiful, appropriate environment by employing the best resources of the site and region.

c. To accomplish these objectives within statewide cost standards of the University and the State of California.

PRINCIPLES

a. *Academic:* The ultimate objectives of the University are education, research, and public service. Therefore, these ends shall take precedence over other goals (such as commerce) in determining planning decisions.

b. *Human:* The physical plan is developed for people, and must accommodate their physical and emotional capacities and sensibilities. Convenience must be weighed against beauty, for instance.

c. *Flexibility:* The campus plan and building plans shall allow for changes in the Academic Plan and other policies, especially in the first decade.

d. *Site:* The natural topography and the relationship of the site to the sun, wind, ocean, and mountains shall be used to enhance academic life and to present the University to the public. The high ridge now occupied by Highway 101, for instance, will furnish the sites for the most prominent buildings and main pedestrian movement. The effect of topography on the utility system shall be recognized in the plan.

e. *Landscape:* The entire visual, physical scene shall be considered a total landscape. Plant material, campus furniture, fine arts, and graphic design shall be employed to enhance the academic plan and human enjoyment of the environment.

f. *Circulation:* The pedestrian shall take precedence over the automobile on campus. Major vehicular traffic shall be routed around the campus. Vehicular service access shall be provided to every building. On-campus traffic shall be separated from major pedestrian traffic where feasible.

g. *Parking:* Adequate automobile parking space shall be provided. With the exception of some parking garages used to reduce walking distance, parking shall be provided in surface lots to reduce cost to the students and staff. Priority in location shall be given to faculty, staff, commuting students, and resident students in that order. The majority of cars shall be parked at the perimeter of the campus area.

h. *Utilities and Services:* The plan shall recognize a logical sequential development of utilities and drainage. Utilities shall be built underground.

i. *Buildings:* Each college shall be distinct and reasonably expandable. Academic buildings containing students subject to class-change shall be grouped close together. Large units on the order of 100,000 square feet shall be favored over small elements. Building design shall respect the orientation, climate and advantages of the site. Housing shall be placed on the perimeter of groups of academic buildings. Housing near the center of the campus shall use less land per unit than housing near the fringes.

j. *Design:* Great diversity is bound to develop during thirty years development. The multiple college plan requires unusual measures and careful control if diversity within diversity is not to lead to chaos. Therefore, unity within each college, differentiation between colleges, and a unified diversity of the campus as a whole shall be the goals. Color, form, texture, materials, landscaping, paving, and graphics shall be used to carry out these principles.

Each college shall have its own unity within a strong framework which unifies the campus as a whole and identifies the "center" of a group of "centers." A visual focal point shall identify each cluster and a supreme focal point shall mark the central core.

k. *Sequence:* Each college shall be developed as a functional entity before development of a new, adjacent college. Development of three clusters of colleges at the south, north, and east shall follow each other in that order.

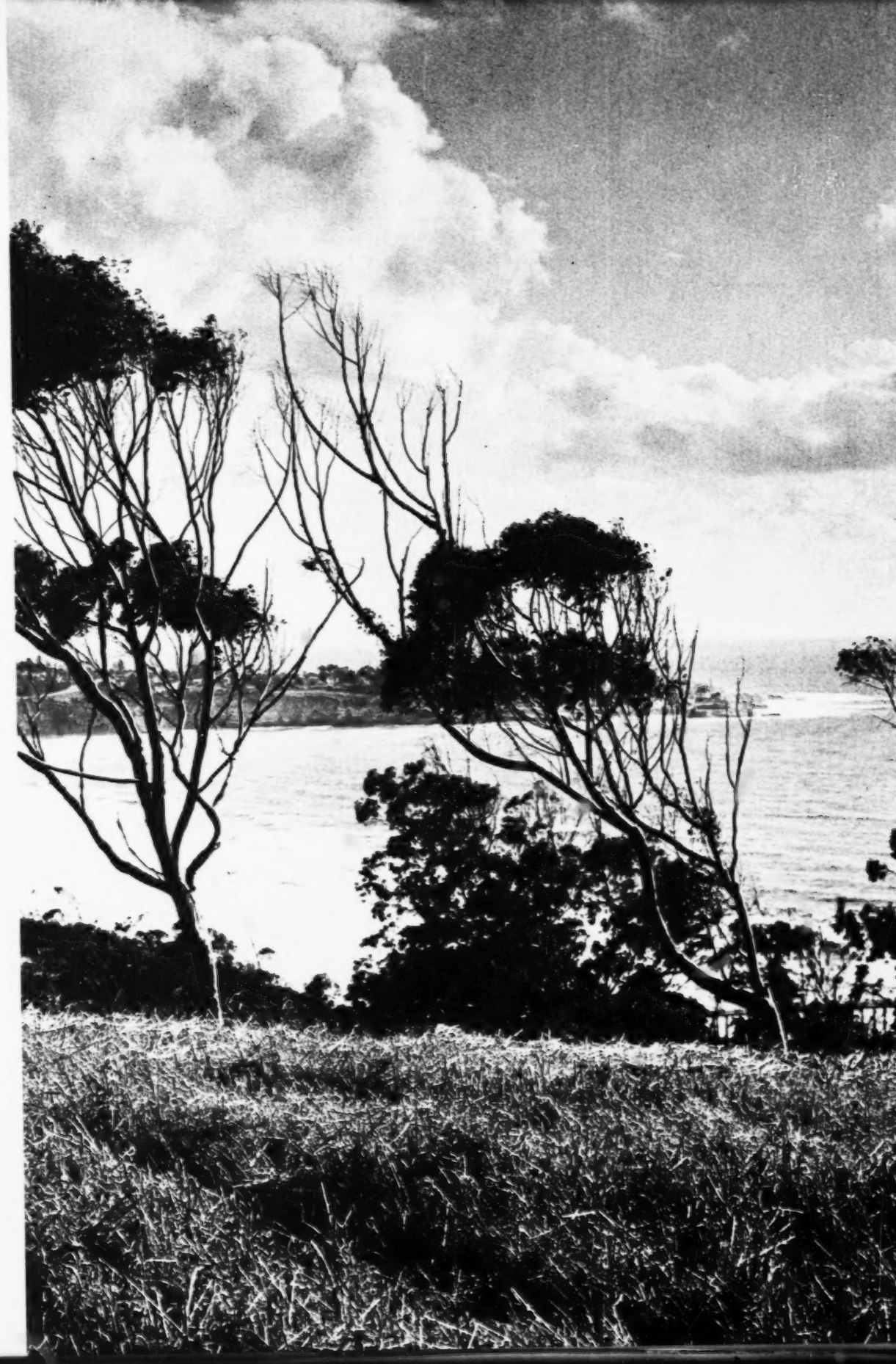
l. *Cost:* In general, the space and cost standards of the Statewide University shall not be exceeded for University of California, San Diego. Any specific deviation from this principle shall be justified by a clearly defined academic advantage.

m. *Land Acquisition:* The direct functions of the University shall be accommodated on the land now owned by or pledged to the University. Areas for field stations and auxiliary functions unsuitable for campus location shall be obtained. The University will seek other land adjacent to the campus only to the extent necessary to protect the long range interest of the University.

n. *Community Relationships:* Continuing liaison shall be maintained with officials of San Diego and with community organizations such as the La Jolla Town Council to help resolve development problems of mutual concern. The plan shall relate to the community with the maximum long range advantage to the University and the public.

o. *Private Organizations:* Land shall be reserved for private student service organizations and commercial services conveniently located to student, faculty, and staff.

p. *Assumptions:* (See Appendix 38).



REGIONAL MAP

III. Site

It is appropriate that a large general campus of the University should be located in San Diego, which is the third largest metropolitan area in the State. One of nine campuses of the University, its location will be within 30 minutes driving time of more than one million people in 1970. Metropolitan San Diego grew 92% during the decade prior to 1950, 85% in the following ten years, and is estimated to reach three million by the turn of the century.

The campus site is on the coast, almost half way from the Mexican border to the north boundary of the county. It is within the city limits of San Diego about 12 miles north of the central city. The San Diego Freeway, now under construction at Del Mar, will make it possible to drive from the campus to the central city in 15 to 20 minutes or to central Los Angeles in less than two hours. The projected Inland Freeway will provide the major access to the campus from the most heavily populated area it serves. The Escondido Freeway, six miles east, will provide access to the "Inland Empire" including Riverside and San Bernardino.

The campus location is north and west of the geographical center of University Community. The Regional Center is located at this geographical center southeast of campus land. Substantial amounts of low-density housing areas have been indicated to the east and southeast of the campus. Some land separated by a broad canyon from the south boundary of the campus has been designated for high-density residential use as well as some land north of the campus, opposite the Torrey Pines golf course. La Jolla lies to the southwest of the campus, and the area immediately west contains a very low-density subdivision. Land north of the campus is designated for research and development

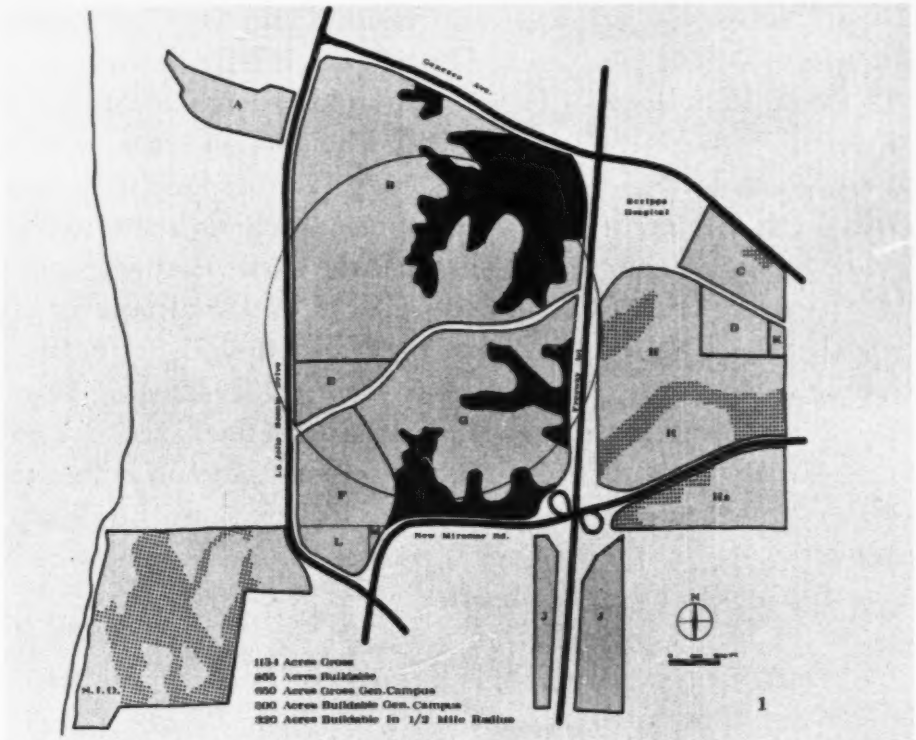
use, including the site occupied by General Atomics. The surrounding community, to contain about 90,000 people, will have access to the University by a new road system on the perimeter of the campus. Regional access will be facilitated by two freeway interchanges adjacent to the campus, and by two at the Inland Freeway to the east. A deficiency of housing adjacent to the campus may prove to be a problem in the future.

The site itself, especially the western portion, is one of the most beautiful in the world for its purpose. Its most pronounced and commanding topographical feature is a ridge now occupied by Highway 101, running north and south parallel to the ocean, more than 400 feet above sea level. Roughly 100 feet above portions of the plateau east and west of it, the ridge provides spectacular views of the Pacific Ocean to the west and of the Laguna Mountains to the east. Only about 2000 feet west of the campus, a 300 foot cliff drops to a sandy beach. Steep canyons on the north boundary of the campus and one which lies within campus boundaries, are more than 200 feet deep.

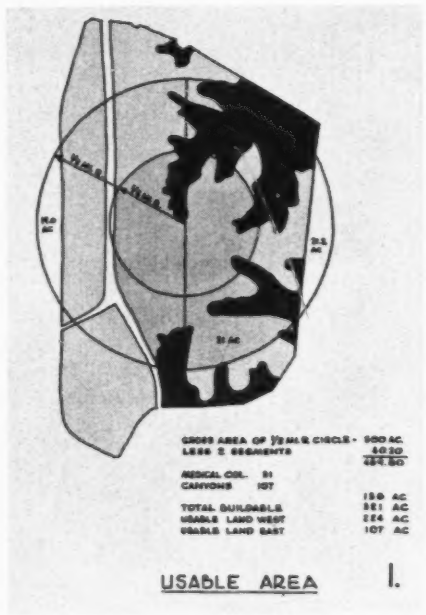
Studies of noise from jet aircraft taking off from Miramar N.A.S. indicated that reasonable building design precautions would minimize interference and that most campuses have similar noise problems.

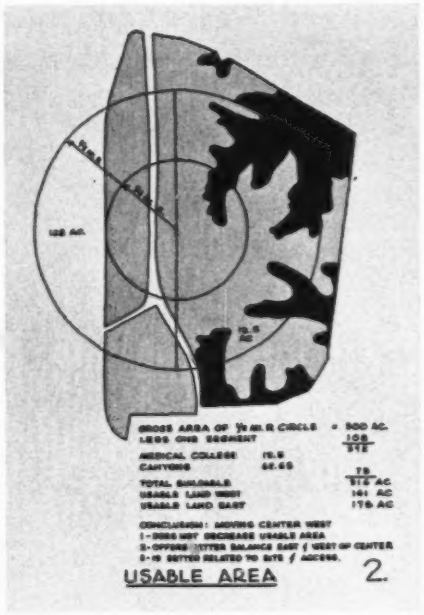
An evaluation of the general soil and foundation conditions on the site was prepared by LeRoy Crandall and Associates, consulting foundations engineers. They report briefly in their covering letter as follows: "From a foundation and earthwork standpoint the site is practically ideal. The plateau areas, which contain the majority of the structures, will offer excellent support to conventional spread foundations. Although the materials are firm and competent, they can be excavated economically with heavy earth moving equipment, and the majority of them can be readily compacted to produce fill of high quality. Although some minor slumping has occurred in several of the steep walled canyons, these conditions are not deep seated, and can be corrected wherever it becomes important to an adjacent building site. A number of man-made fills exist in the Camp Matthews area, but these are relatively nominal in extent and can be removed and re-compacted wherever they affect the Long Range Development Plan."

The climate and agricultural characteristics of the site were studied by staff members from the Davis campus under the direction of Eugene L. Begg. Problems of poor drainage, erosion, salinity, corrosive and electrolytic action as well as severe nitrogen and phosphorus deficiency were encountered and mapped. Corrective action can and must be taken in the course of development as recommended in the Begg report.



U.C.S.D. LAND ANALYSIS

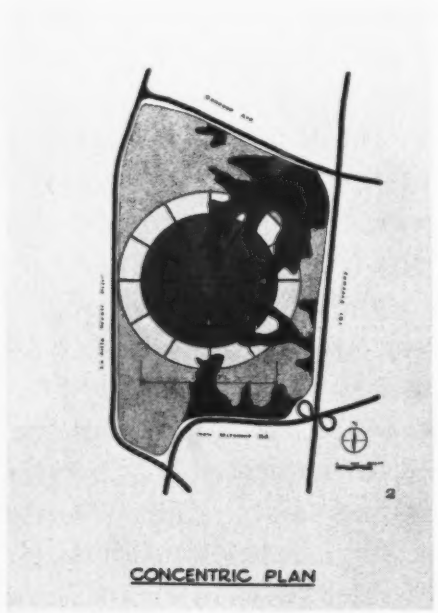




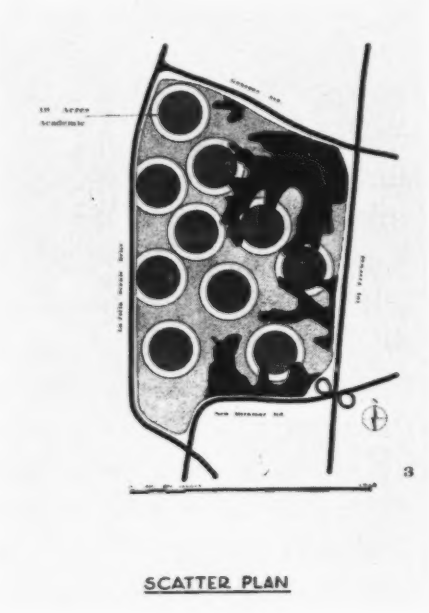
IV. Concept

An estimate of land requirements for a campus of 27,500 students based on UCSD assumed criteria (Appendix 39) indicated that at least 300 net acres would be required for academic structures, resident single student housing, parking, and recreation. Graduate teaching and research called for 110 acres additional. If the College of Medicine was to be associated with other academic functions, about 500 acres would be required. The campus site west of the San Diego Freeway contains one square mile. When steep canyon areas are deducted, this portion of the site contains 500 net usable acres.

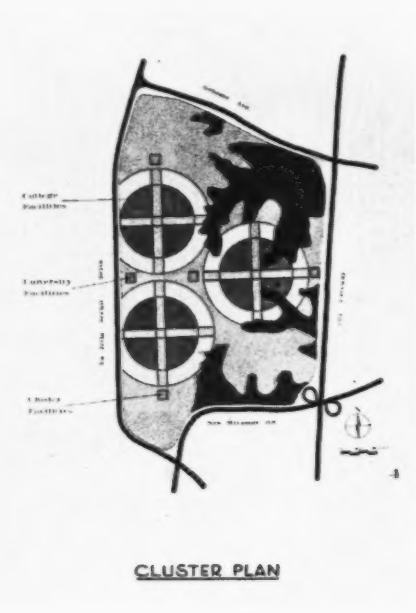
A one-half mile radius taken from the geographical center of this portion of the site includes 321 net usable acres. There is much more usable land to the west of the center than to the east. Moving the center of the circle west to within one quarter mile of Scenic Drive, it is found that net usable land on the campus within the circle is almost unchanged, and that the area west of the center is in better balance with land to the east. This study resulted in the decision that the general campus would be located west of the San Diego Freeway, and that its center would be feasible east of the ridge occupied by Highway 101.



CONCENTRIC PLAN



SCATTER PLAN



CLUSTER PLAN

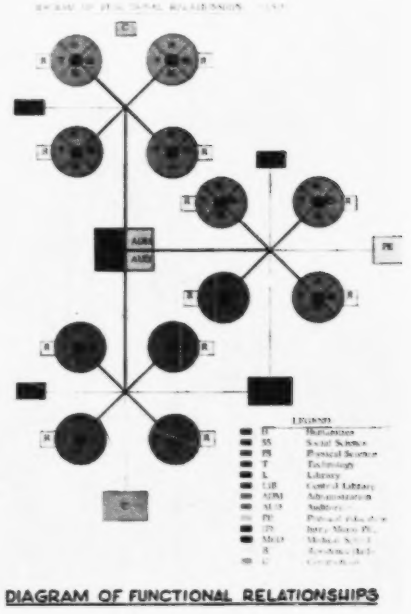


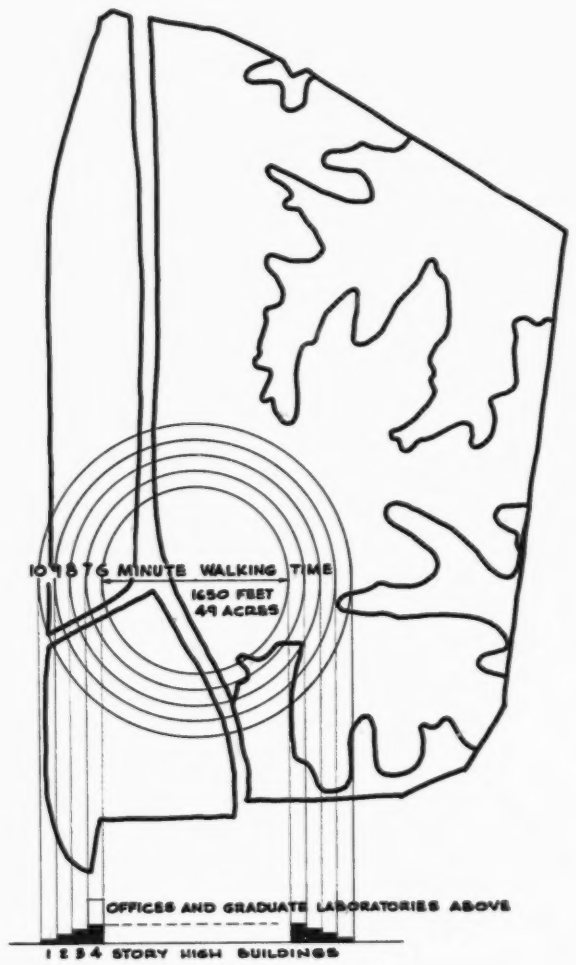
DIAGRAM OF FUNCTIONAL RELATIONSHIPS

The UCSD problem was approached diagrammatically as follows:

1. A concentric university containing 160 acres of academic area in a 3000 foot diameter circle was placed on the site, surrounded by residence hall areas. Conceivably it could be subdivided into pie-shaped colleges to conform to the Academic Plan, but it would be difficult to distinguish one college from another. Central facilities would occupy the space least dependent on class break time. The concept was considered inflexible.

2. Each college might attain maximum separation and distinction if colleges were scattered about the campus. This concept might work with even much greater separation if each college were independent. The Academic Plan, however, called for some dependence on other colleges, and on the concept of University-wide unity.

3. The germ of the concept finally adopted was the suggestion in the Academic Plan that the first four colleges would be able to offer virtually the entire spectrum of academic opportunities at UCSD. This led to the concept of three clusters of four colleges each, focused on a central area. The idea then evolved that some functions not practical to subdivide into twelve components, and yet divisable at an intermediate level, might be divided into three parts, one to serve each cluster. The problems of walking time and of central facilities interfering with academic functions in large universities were resolved. The planning concept reflects the ideal of the Academic Plan, which in effect calls for three virtually self-contained universities gathered around a central focus. The diagram of functional relationships illustrates the planning concept and the Academic Plan combined.



CAMPUS WALKING TIME

In the land requirement analysis it was noted that academic structures alone would require about 160 acres. This area is contained in a circle 3000 feet in diameter, which appears to conform nicely to the concept of a ten minute class break, assuming a walking time of 300 feet per minute. Observations of walking time made by Julius Caesar, Napoleon, and the U.S. Army are recorded, but the only one based on actual field observation on a campus was found to be one made in 1962 by Anton Egner, a graduate student of city planning at Cornell University. The study indicated that a walking time of 275 feet per minute would be a practical standard, and that about one-half minute each should be allowed for entering class, leaving class, and ascending or descending one story height. Thus if classes depending on a class break are located as high as the fourth floor, such buildings should be contained in a six-minute circle of 1650 feet. Lower building height assumptions would expand the circle 275 feet in diameter for each floor deducted, but would also expand the land area required.

The concept was analyzed and tested against the site in terms of topography, land area requirements for the various functions, and circulation. A compelling factor was the existence and location of the School of Science and Engineering on which construction was already well advanced, and which was to become the first college in the general campus. The adaptation of the concept was also influenced by existing roads to be abandoned, and by the probable timing of land acquisition and new road development. A system of "greenways" was studied for its effect on separating colleges and on unifying them into a university campus.

Land requirements for a college of medicine, as well as its relationship to outside influences, are so important that a special study was made for its site location. Each of the four general locations offered its own advantages, but the only site which could be integrated with other academic facilities for years to

come, was found to be the area extending east from existing Highway 101 to the San Diego Freeway north of New Miramar Road. Adjacent to the first two colleges, it would offer 60 to 80 acres on the perimeter of the general campus, and would be expandable even beyond that area across a freeway bridge to a 30 acre site east of the freeway.

This site, however, displaced a "town center" of 53 acres shown on the University Community Plan. Since town center functions appeared to have been provided for elsewhere in the University Community Plan revised in 1961, Real Estate Research Corporation was asked to make a study of commercial facilities. Their retail market analysis is published in a separate report. The summary of conclusions indicates that the community could not support two major town centers a mile apart, but that there will be a need for a convenience goods center, best located south of the campus. It justifies the possible development of a similar center north of the campus in the future, providing multiple family residential property to the north is developed.

Land use and circulation studies were converted to hypothetical building plans and the resulting interim plan and report was presented to The Regents, July 19, 1962. A general criticism that individual colleges were too close together for reasonable flexibility and for separate identification led to a study of maximum college separation. Limits of walking time and convenience were exceeded. A modification of this plan, conforming to the planning assumptions, became the basic proposal for the Long Range Development Plan.

V. Long Range Development Plan

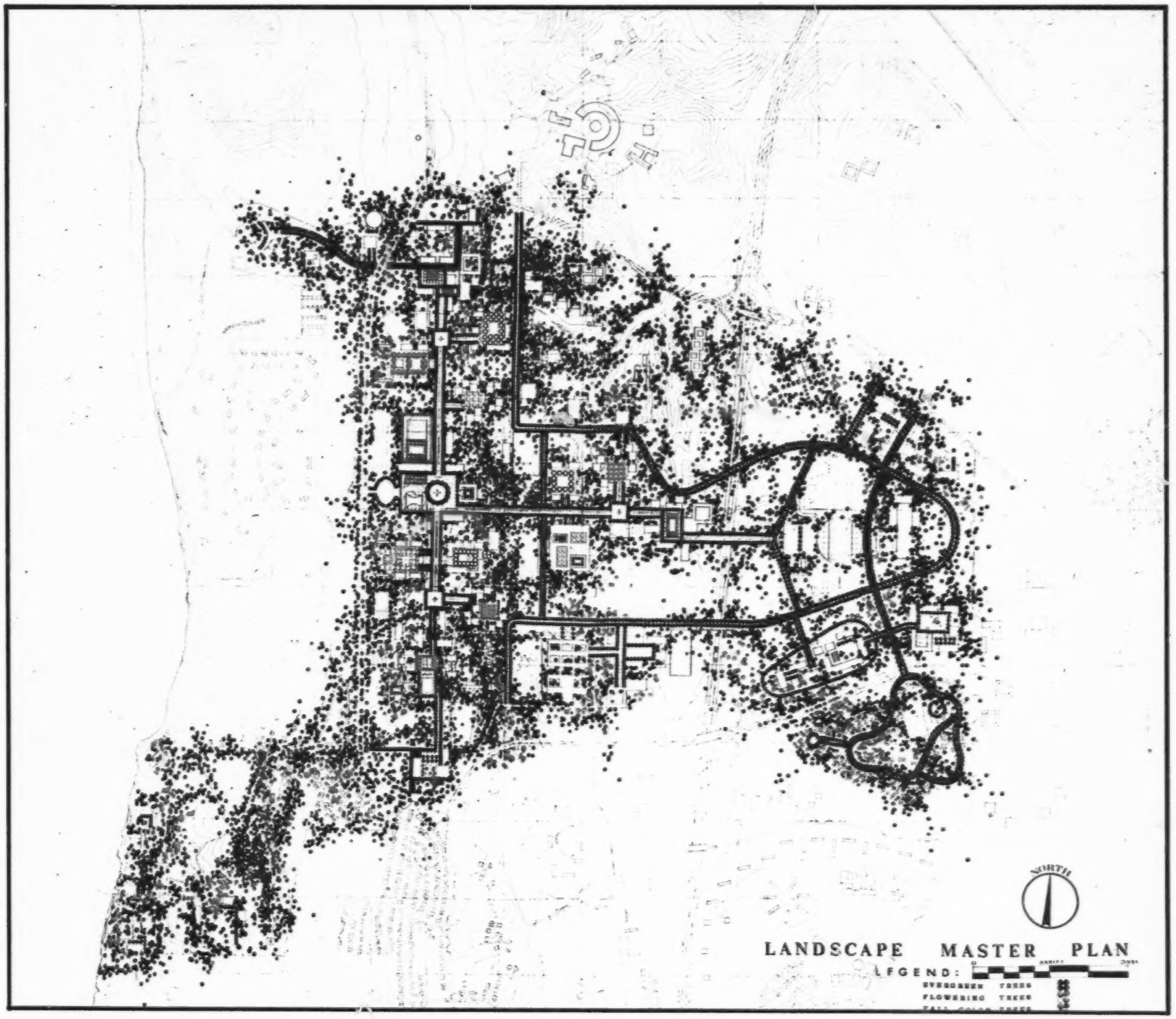
The Long Range Development Plan is shown in two forms, folded in the rear pocket. The black and white plan, referred to as a "Fact Map," designates areas and buildings by name and shows building heights and numbers of automobiles parked. The plan in color illustrates the architectural form of the plan and its major features, including a suggestion of landscaping, walks, plazas, water features, circulation, and parking. Labels and numbers are omitted to emphasize the design in graphic terms. The plan has been compared with plans of other Universities. (Appendix 40).

In the case of the UCSD site almost the entire development of the next twenty years, when built, will be visible at a single glance from many locations. The great variety in forms required to distinguish one college from another is proposed to be offset by a rectilinear building arrangement. It is only by super-imposing in ones mind the proposed landscape plan on the Long Range Development Plan, that the ordered unity of building composition is softened by the large areas of informal planting. To avoid confusion and to emphasize the various elements of the plan, they have been treated separately as follows:

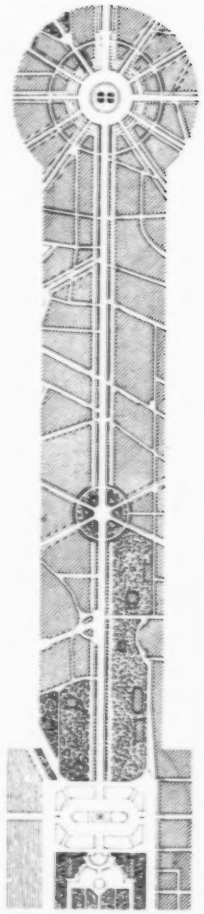
1. LANDSCAPE

The report on the landscape study by Wimmer and Yamada, ASLA, Consulting Landscape Architect of the campus, outlines landscaping policy, defines a tree list for the first cluster, and estimates landscaping costs. One problem inherent in carrying out the Academic Plan, which calls for each college to have its own distinction, is that of unifying diverse elements. One major task of the landscape architect on this campus will be to contribute to the objective of producing unified diversity. The Carob tree has been chosen as the predominant shade tree for pedestrian malls and major roads where its planting in formal rows will tend to unify the campus as a whole. Thus the main north-south pedestrian way is to resemble in scale one of the great boulevards of the world, the Champs Élysées. Unified planting, paving, benches, and light fixtures throughout the general campus walks and main plazas, will contrast with the diversity found in courts and plazas of the colleges. A different flowering tree is proposed for each college court. Flowering Eucalyptus will be used for the first college, the Coral tree for the second, Acacia for the third, and Magnolia for the fourth, for instance. Combined with distinctive paving, textures, ground cover, benches, and light fixtures, the flowering trees are intended to enhance the academic plan by individuating colleges.

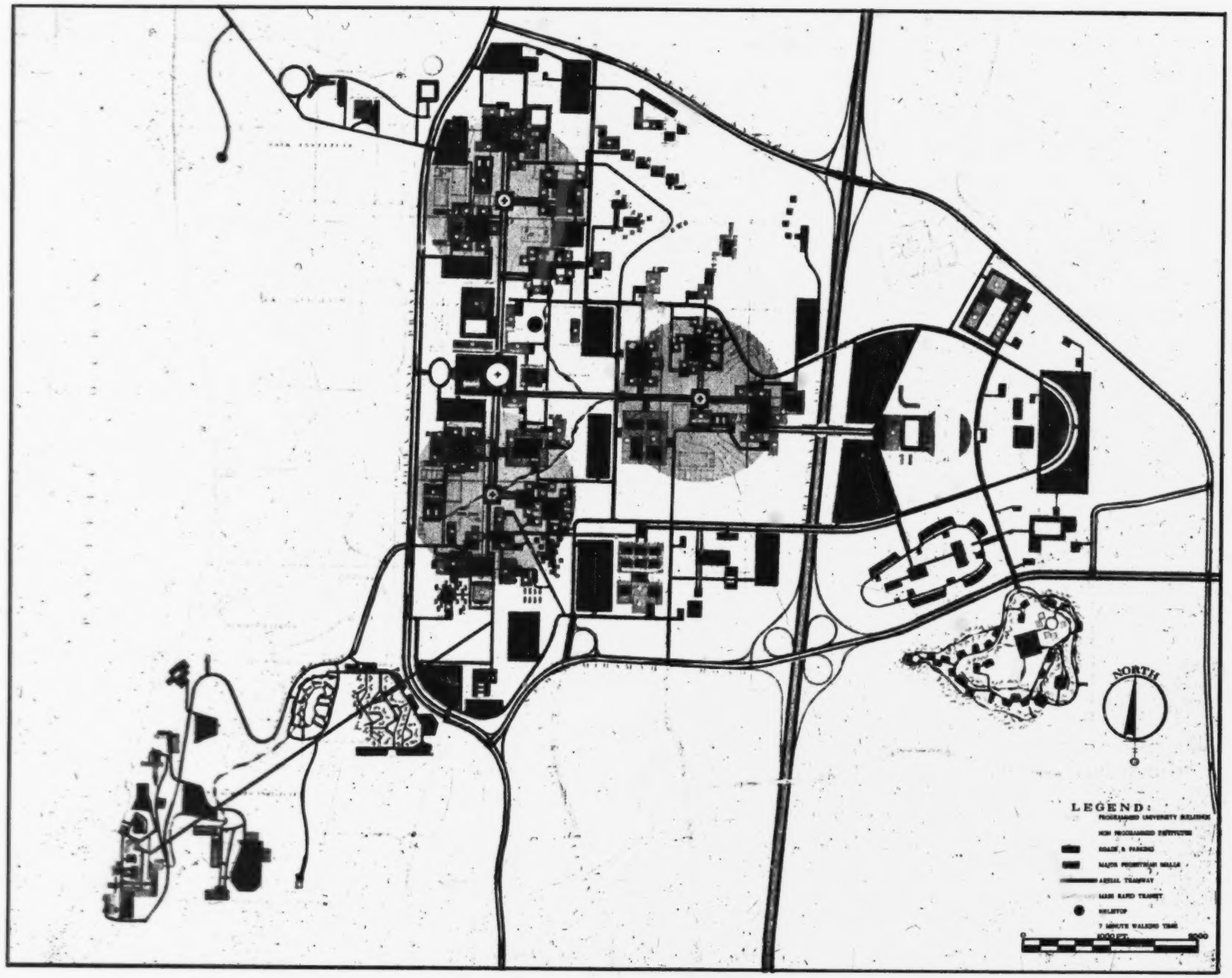
Existing trees include many good specimens which will be conserved. A separate report on the Eucalyptus lining Highway 101 indicates very heavy damage over the years from vehicular collision and neglect and recommends that they be replaced, because they will probably not survive a change in environment. The large groves of Eucalyptus are effective as a mass background, but consist mainly of very inferior material. The Torrey Pines, unique trees which are native to Torrey Pines Mesa, and which once covered it, will be brought back to the northern part of the site for informal planting.



LANDSCAPE PLAN



CHAMPS ÉLYSÉES



CIRCULATION & PARKING PLAN

2. GRADING

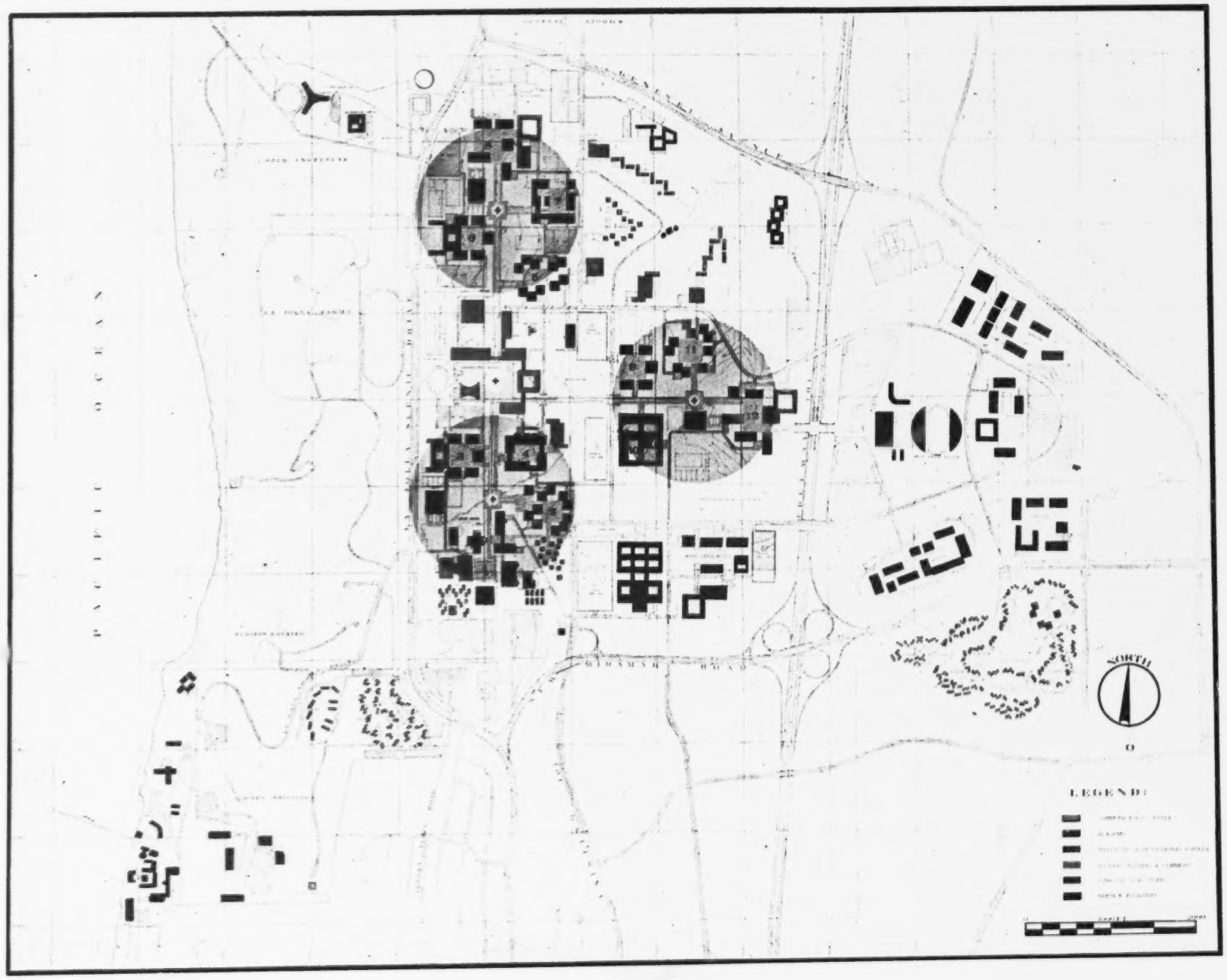
General control elevations have been established on a grading plan (Appendix 42). The objective has been to retain the major topographical features of the site. Minimum changes in grade are proposed. The high ridge occupied by Highway 101 is to remain at its present elevation, sloping about one percent up from south to north. College courts will be at lower elevations at each side of it. Natural topography has been modified slightly in some cases to separate pedestrian from vehicular traffic. The only dramatic changes in grade from existing conditions are proposed for the freeway, which will be below the general campus plateau, and for roads connecting to it, which traverse rugged terrain. Genesee Avenue for instance, is planned to cross the present site of Sorrento Valley Road on about 80 feet of fill.

3. CIRCULATION AND PARKING

The circulation and parking map illustrates basic policies calling for perimeter circulation of major traffic, parking on the perimeter of clusters, convenient service to every building, and virtually complete separation of pedestrian and vehicular circulation. The three clusters of four colleges each are shown within circles, the diameters of which represent seven minutes' walking time. Major formal pedestrian ways are to be supplemented by informal diagonal paths.

The plan contains parking space for about 25,000 automobiles (Appendix 43). On one level they would require about 130 acres of land, resulting in unreasonable walking time and distance. Consequently, five parking structures are included. Three of these near the center of the campus are proposed to be developed with recreation areas on the roof. Most of the parking structure sites have been selected in ravines, requiring little excavation to place them below the level of the plateau. Separate parking is not proposed for the 30,000 seat arena, which is designed for students, faculty, and staff. It is anticipated that any university events attracting thousands of outside spectators will be held off campus.

Special transportation features shown include a helistop near the center of the campus, an assumed mass rapid transit route on the freeway alignment with a station on the main east-west promenade, and an aerial tramway from the beach level near the Scripps Aquarium to the general campus level, south of College I. A schematic design of the latter facility indicates that it might be installed for about $140,000. The appeal of the Aquarium and such an exciting and beautiful ride over the La Jolla hills might make such a facility self-supporting. Bus transportation is assumed from the town center west along New Miramar Road and north on Scenic Drive to its intersection with Genesee Avenue. If the Academic Plan and facilities plan meet expectations, the relatively self-contained clusters should minimize the need for bicycles on campus. Travel from married student housing areas to the campus, however, may very well create a modest demand. It is proposed that provisions be made for bicycle parking at each building service court, and that bicycle traffic be confined largely to interior service drives. A few supplemental bicycle paths, such as one adjacent and parallel to Scenic Drive, might be required to round out the plan if an extensive demand develops.



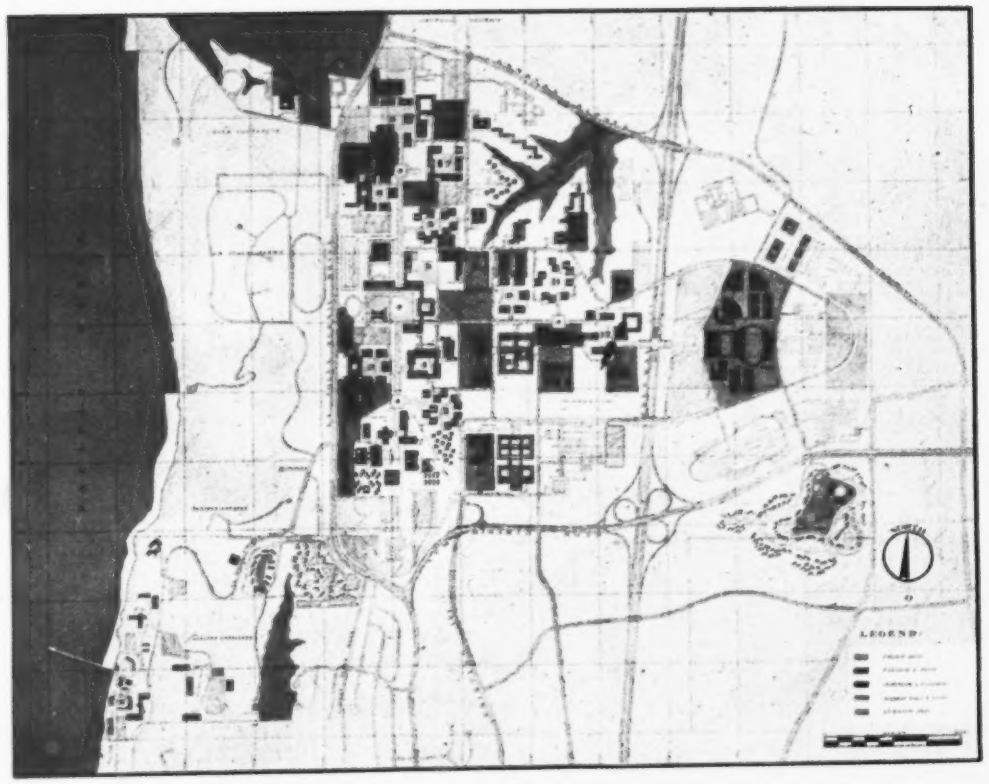
USE OF LAND & BUILDINGS PLAN

4. USE OF LAND AND BUILDINGS

An analysis of land use (Appendix 44) assigns 22.5 acres to each college, including 11 for academic buildings and the balance for general services, residence halls, and recreation. About 100 acres is reserved for each cluster of four colleges, including intramural physical education and a portion of the general campus mall. 44 acres are designated for central facilities, and 56 acres for the College of Medicine, excluding parking. Each of these last two figures includes 100% reserve for expansion. Thus academic, administrative, and residential facilities on campus total 400 acres. Parking and reserves for commercial and institute use bring the total land used on the general west campus to 500 acres, the usable land available.

The 170 usable acres on the east campus are assigned to university physical education, parking, a corporation yard, and reserves for future institutes. 40 acres on the east campus are assigned to married student apartments, as are 24 acres west of Scenic Drive. The 62 acres of the old Scripps site reserved for institutes and 28 acres proposed for a Conference and Recreation Center bring the total land used to 825 acres, which corresponds to the net usable acres available out of 1124 owned by or pledged to the University.

Academic buildings are assumed to average five stories high including basements and to cover 20% of the land. The most significant difference between the UCSD plan and the plan for a "monolithic university," is the location of residence halls and informal playfields adjacent to each college. In each case they have been indicated on the perimeter of a cluster, and are assumed to be four-story walk-up dormitories on the perimeter of the plan, and multi-story elevator buildings when located near the center of the plan, to conserve land. Each college is assumed to have a small student center to serve both resident and non-resident students, faculty, and staff. The first one includes a book store, student organization offices and recreation rooms, student health offices, and a small facility for resident and visiting faculty, as well as dining halls. Experience in operation will indicate whether all facilities can be repeated for each college economically and successfully, or whether the book store, for instance, might become a facility serving a cluster, or health services might better be centralized for the entire university. The plan provides for housing 50% of the single students, even though only half this amount of housing may be built ultimately. The plan includes apartments for one-third of the married students, located off the general campus close to shopping and school facilities. The bulk of the apartments is assumed to be built at an average density of 36 per net acre.



RECREATION PLAN

Athletic facilities are assumed to be divided in half. Fifty percent of the land for athletics is located east of the freeway to serve "hard ball" or intercollegiate sport. (Appendix 43). It is served by a field house, which might also include an exhibition basketball court, comprising 50% of the building space allocated to athletics. The other half is pro-rated to three small gymnasia, each one of which will serve a cluster designed for 9200 students. A small recreation field is attached to each cluster gymnasium, and the balance of the land assigned to athletics is adjacent to the residence halls pro-rated to the twelve colleges. This distribution will provide for soft ball, touch football, tennis, and other court games close to the students. It is hoped that this arrangement will stimulate intra-mural, inter-college, and inter-cluster athletic rivalry.

Service buildings include a communications and mechanical building already completed at the south end of the campus, a future supplementary mechanical building at the center of the plan, and a corporation yard on the east campus. For many years to come, this last named function will probably occupy temporary existing buildings on Camp Matthews. The future permanent site, close to a freeway interchange on the perimeter of the campus, is calculated to reduce heavy traffic through the campus.

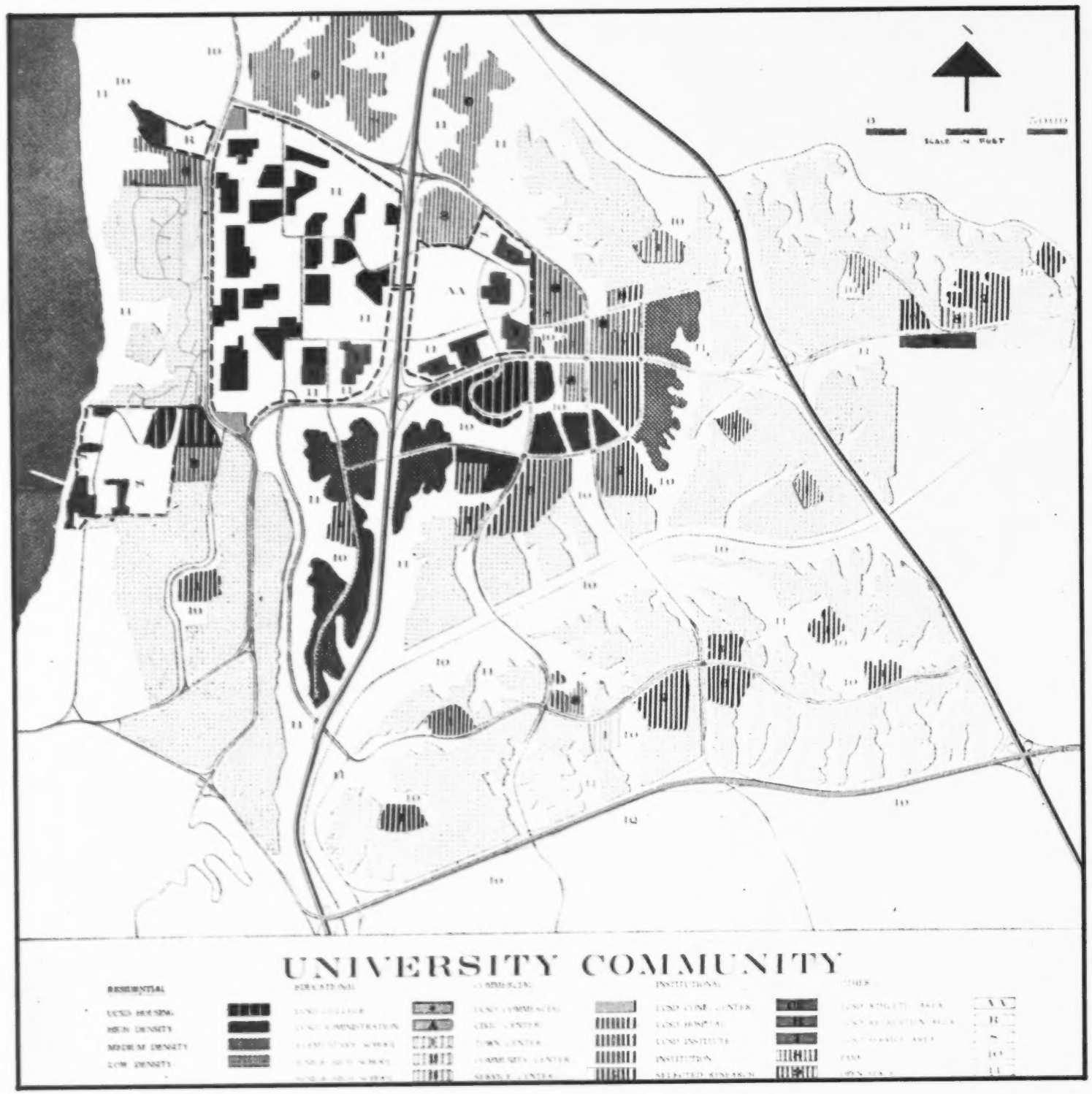
To accommodate growth in the distant future, the plan provides space for 21 million gross square feet of construction, including over 3 million square feet of parking garages and 6 million square feet reserved for expansion and unspecified institutes. The only professional school identified and shown separately is the College of Medicine. Others are assumed to be accommodated within the colleges.

5. UTILITIES AND SERVICES

The plan has been analyzed in general for feasibility, cost, and policies in each category of utility. The report on heating and cooling by Boris Lemos, Mechanical Engineer, proposes to continue the policy, already begun, of providing high temperature hot water and chilled water to buildings from central locations through a tunnel system which will also be used for most of the power and communications distribution. The existing plant can be expanded to serve the first cluster. It is proposed to start a new plant central to the campus as a whole in 1975, which may conceivably use atomic fuel to generate electricity as well as hot water, and to chill water for two-thirds of the campus in spray ponds which, because of their design and location, promise to be successful and economical in place of cooling towers. (Appendix 45)

The report on electrical distribution and communications by Frumhoff & Cohen, Electrical Engineers, proposes to continue the power distribution throughout the general campus at 12,000 volts. Services, assumed to come from the south, result in a natural, economical expansion to the north with the growth of the campus. Not only will distribution on campus be underground, but the City has adopted an ordinance requiring underground distribution in the surrounding community. A central telephone switchboard has already been established on the site of the first college, including service to Scripps Institution of Oceanography and all other university buildings. Recommendations for campus lighting, the fire alarm system, the synchronized clock system, and a paging system are included. (Appendix 46)

Boyle Engineering, Consulting Engineers, has prepared a civil engineering report on grading, paving, bridges, water, sewer, storm drains, and gas distribution. As in the case of other utilities, it is reported that plans for growth of the campus from south to north in successive adjacent stages, and basic decisions related to natural topography, result in an economical development plan. Relatively little earth work is contemplated. An existing 16 inch water line, which extends through the center of the campus, will act as the backbone of the university water system. The first three colleges will be served by the existing Rose Canyon sewer outfall. The balance of the general campus is proposed to be served by a University-owned sewage treatment plant and reclamation pond in Sorrento Canyon on the campus. It is estimated that conserved water re-used for water chilling or irrigation will not only save money but will also set an appropriate example in an arid area. Storm drain structures are simple and few in number. (Appendices 47, 48, 49, 50)


UNIVERSITY COMMUNITY

6. THE COMMUNITY

Many facilities significant to the university already exist or are planned in the immediate vicinity of the campus. The Salk Institute, a center for advanced research in biology and other fields, is under construction immediately west of the general campus. The Torrey Pines Golf Courses and Inn are completed adjacent to and northwest of the campus. General Atomics, a research and development installation of General Dynamics, has been in operation for several years adjacent to the north boundary. Scripps Hospital is under construction south of Genesee Avenue, and east of the San Diego Freeway. The La Jolla Country Day School is operated adjacent to the east boundary, and several churches are planned to be built immediately north of this site. A telephone company building is under construction in the branch civic center planned adjacent to the east boundary, north of the professional building center, west of the commercial service center, and northwest of the regional shopping center shown on the City Plan. The City Plan also calls for a high school, a junior high school, and an elementary school south of this center. Most of the funds have been raised for the La Jolla Theatre Arts building, which is planned to be built adjacent to the southwest corner of the campus. All these facilities will have a beneficial impact on University development.

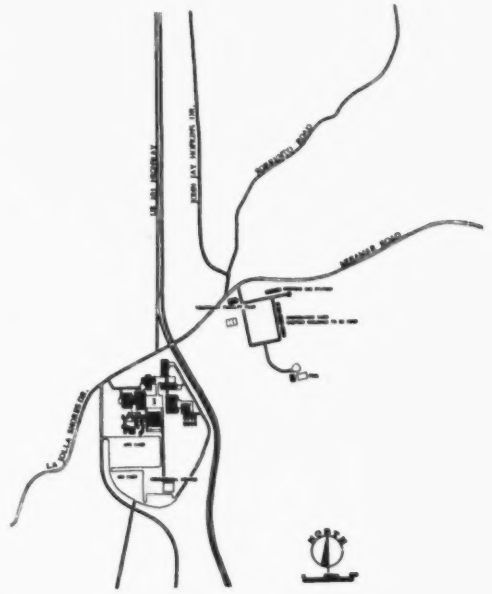
GENERAL ATOMICS

TORREY PINES GOLF COURSE

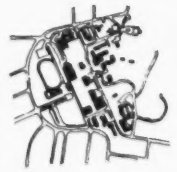
SCRIPPS HOSPITAL

7. STAGES

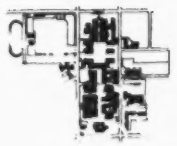
The academic concept of developing twelve partial universities results in an economical development plan. Growth plans call for the completion of the First College in 1967 to accommodate about 2500 students in 1968. At that time UCSD will be a small, compact university, capable of fulfilling the academic and non-academic requirements of a student body of about the size and composition of Occidental College and Caltech combined. The San Diego Freeway and the perimeter road system should be constructed by then, and traffic should be eliminated from Highway 101 and a portion of Miramar Road. Three years later, the Second College accommodating 2300 students as well as the School of Medicine should be in full operation on Camp Matthews land adjacent to the First College. A gymnasium to serve the first cluster, the first unit of the central library, and a portion of the administration building shown on the second stage plan, may possibly be deferred until the third stage. Two and one-half years later, the Third College, as well as some central facilities, should be in full operation, and it is expected that by 1975 the addition of the Fourth College will round out a university the size of Stanford today, without having committed more than one-third of the general campus land. Growth plans call for accommodation of a second cluster of four colleges accommodating 9200 students north of the central area in the following ten years, and a third cluster east of the center before the turn of the century.



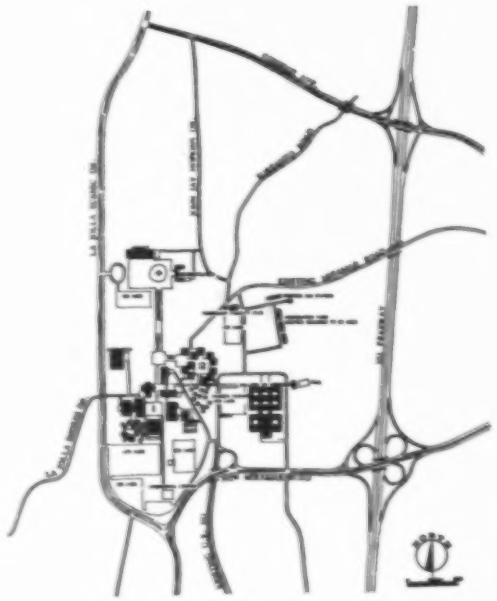
U.C.S.D. · 2500 STUDENTS



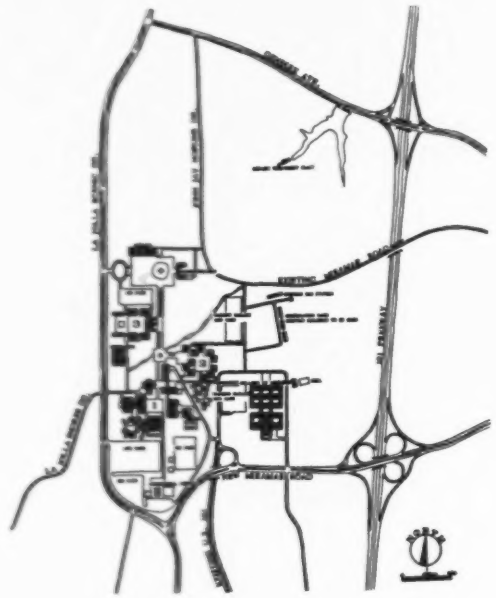
OCCIDENTAL COLLEGE
CAMPUS PLAN · 1,540 STUDENTS



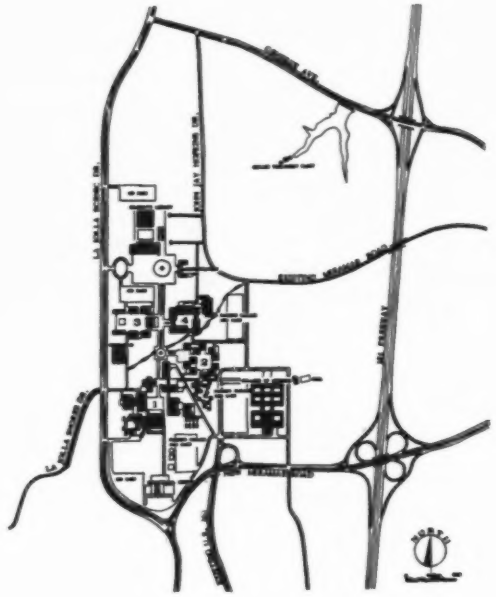
CALIFORNIA INSTITUTE OF TECHNOLOGY
CAMPUS PLAN · 1,330 STUDENTS



U.C.S.D. - 4800 STUDENTS



U.C.S.D. - 7000 STUDENTS



U.C.S.D. - 9200 STUDENTS

The growth plan is not only economical but flexible for a reasonable period of time. Several years of experience in operating the college concept will occur before it is too late to change the concept radically. The first step which might be contrary to the principles governing a monolithic campus is the construction of College IV dormitories and dining halls, which would otherwise be placed on the perimeter of the plan as a whole to make room for academic buildings. Up to that time, and even possibly at a later date, College I could become the Physics Center, College II the Biology Center, and academic buildings could fill in spaces otherwise assigned to open areas between colleges, or to athletic space. If such a decision is made, the entire north and east clusters should be brought very much closer to the south and west respectively.

STANFORD UNIVERSITY
CAMPUS PLAN - 9200 STUDENTS

8. ARCHITECTURE

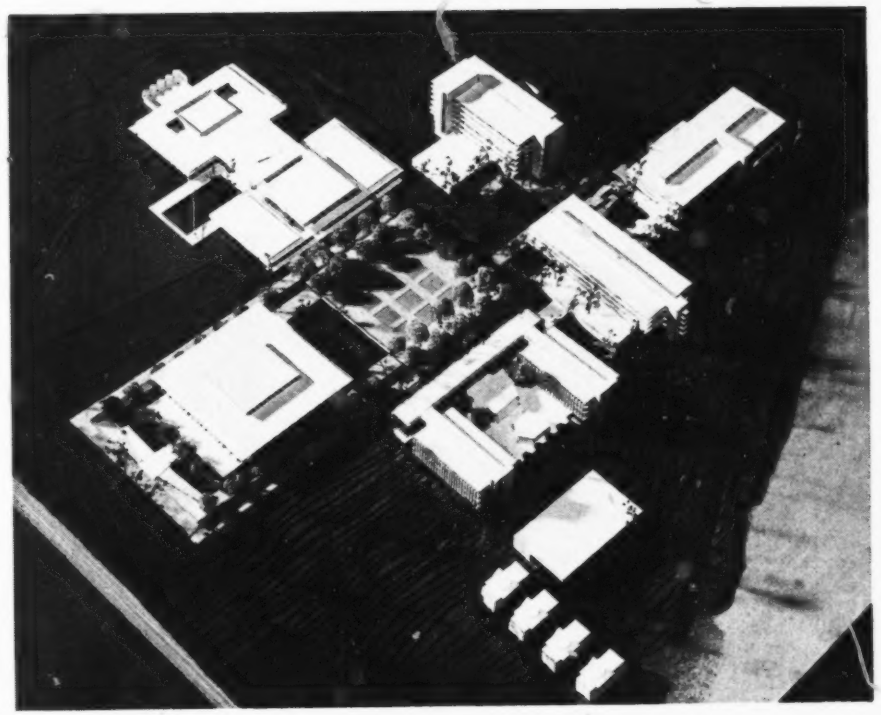
Design proposals have been made without any intention of forcing the architecture of the campus into molds, but rather to illustrate policies. A basic policy proposed by the Academic Plan suggests that each college have a distinct and memorable character of its own. To illustrate this policy, four college types are illustrated and repeated with some variation in each cluster. Each one depends for its distinction, not on superficial variety, but on the basic building form concept. Each college centers on a plaza, the scale of which has been studied for its internal relationships as well as its subservient role in the overall university plan. It is hoped and expected that other ideas will be developed as time goes on, but that the basic unity of a concept will not be violated.

The first college type had been established before it was decided to develop a full scale university campus. It is a relatively loose "open type" college plan, including a maximum of variety in form and building height.

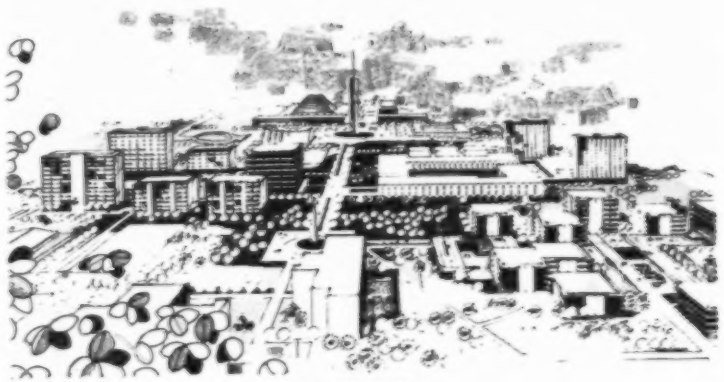
The second college is illustrated as a "cube type" plan, derived from the service core laboratory buildings already found successful on the campus. Although the basic building form in plan is a square, building heights are proposed to vary from two stories to eight, and because the land drops naturally to the east, a distinct character can be developed on the skyline and in terracing of the courts.

The third college is illustrated as a "tower type." This type is suggested to be used near the center of the plan to conserve land. Buildings oriented to the north and south should open to a vista of the ocean to the west. Dining halls and other student center spaces are shown around an open court designed so that the roof deck affords a spectacular view. In contrast to slick, commercial slabs, the effect of an Italian hill town such as San Giminiano is suggested. In the campus design as a whole, two such tower colleges could form pylons framing the heart of the campus from Scenic Drive.

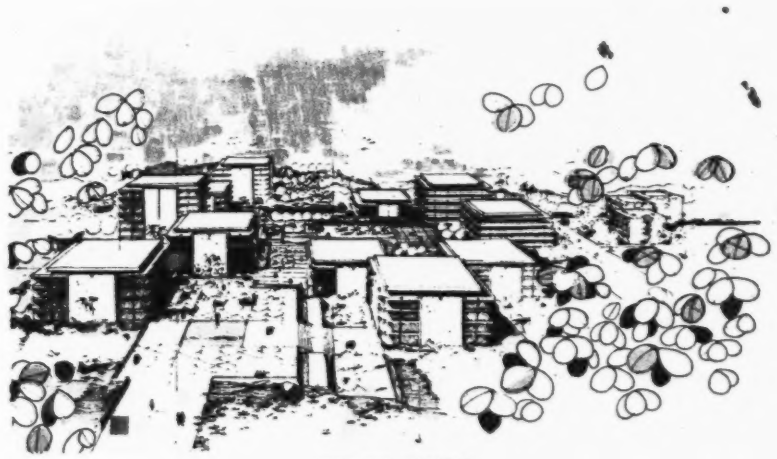
The fourth college is illustrated as a "cloister type." The interior court is similar to Christ Church, Oxford in scale, although the bulk of laboratory buildings surrounding it contrasts with the monastery scale of the English college. This type is not recommended for the west side of the ridge. A variation in College X includes residence and dining halls within the complex.



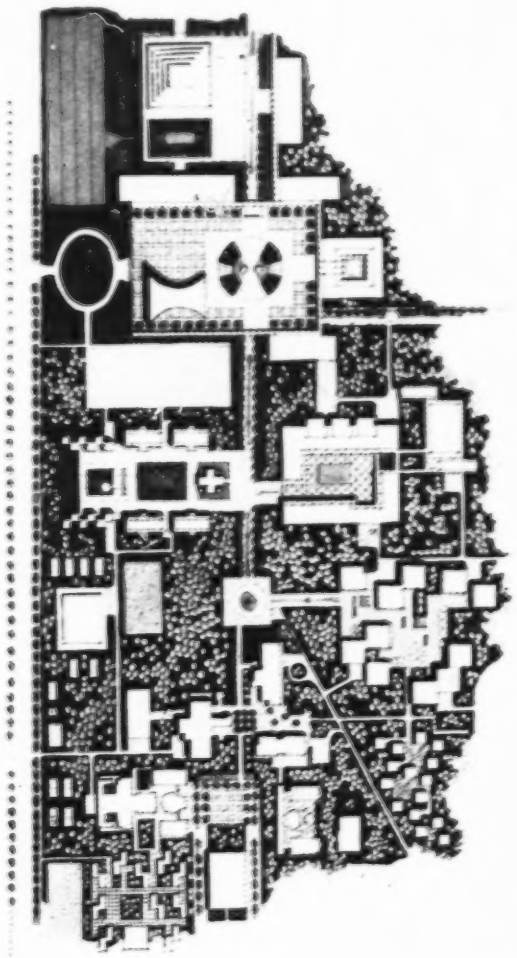
OPEN TYPE



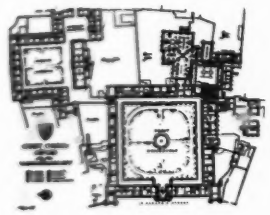
BIRDSEYE



CUBE TYPE

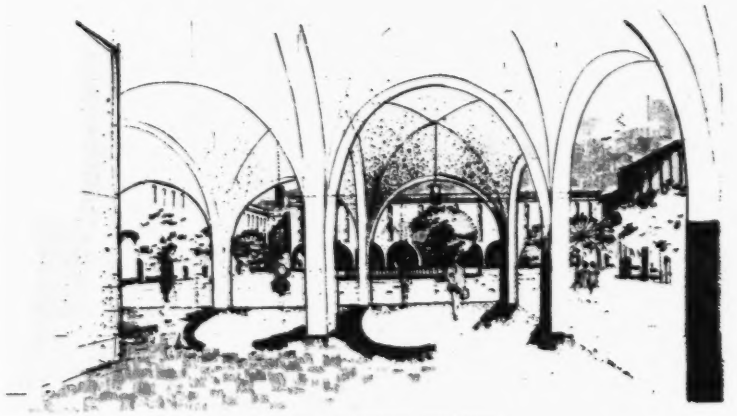


PLAN



OXFORD

TOWER TYPE



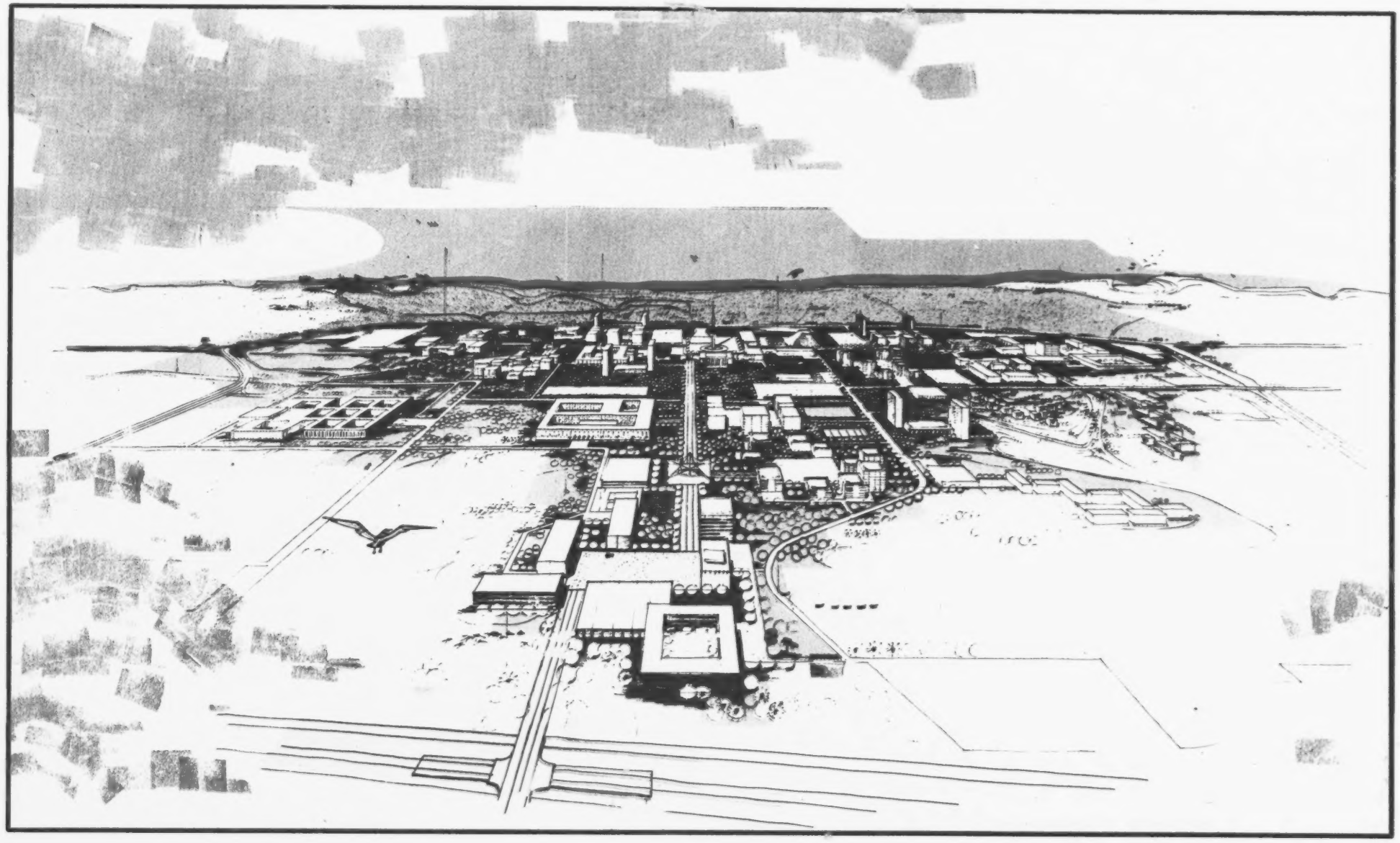
CLOISTER TYPE

Such radically different building forms, consciously sought, could lead from distinction and diversity into chaos unless policies are developed to control them. It is proposed first, that a few simple rules on color and character should be adopted to achieve the objective, unified diversity. Industrial research and salesmanship have opened up a Pandora's box of building materials and color selections. Such exuberant examples as the University of Mexico have sown a seed of wild exhibitionism, which it is proposed to ban from UCSD. The opposite effect that one encounters, for instance, in the unified and even somber buildings of an old world university will be sought. Earth colors will be promoted. It is recognized that the scale of the buildings in earthquake countries, under the austerity of State finance, must result in a substantial amount of undecorated concrete. Through the development of form and texture, however, combined with limited amounts of pure white concrete, this material can be made an acceptable and even a virile neutral background. Shiny "five and ten" store-front metal and garish colors are to be avoided. The saline air should justify the long range economy of using a bronze colored hardcoat aluminum as the basic metal. It is hoped that general adherence to these suggestions, in addition to the unified landscape, paving, and campus furniture programs pervading the campus, will attain the unified diversity sought.

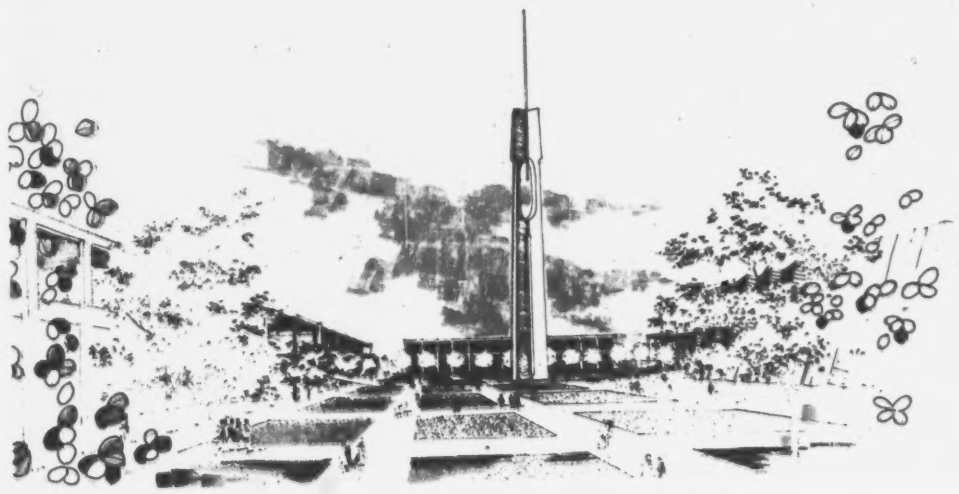
Another important policy suggested deals with the selection of executive architects. The selection of a single firm to handle one college would probably attain the objective of maintaining unity within a college. Because only eleven additional colleges are proposed to be developed over the next thirty years, however, this policy would not take advantage of architectural resources. The selection of several executive architects, independently and at different times to design parts of a college is almost bound to result in the chaos we seek to avoid. If the building program for an entire college is planned in advance, and if executive assignments are made simultaneously to all participants, even in some cases substantially in advance of actual engagement on given segments, the desired objectives might be attained. The leader of the group should be appointed to avoid subsequent internal conflict, and the group as a whole should agree upon design policies as they affect the character of the college complex to arrive at a schematic college plan.

The group might be given the option of forming a joint venture, but even as independent executive architects, having worked out the college concept together in advance, they will find it much more palatable to fit their components together into an harmonious and distinctive college plan. The speed of development after the start of the second college, calling for the completion of a new college every two and one-half years, appears to make this plan more feasible here than in a slowly developing institution.

Alternate solutions may be considered, such as increasing the responsibility of the consulting architect in specific building planning.



GENERAL CAMPUS FROM EAST OF FREEWAY LOOKING WEST



THE GREAT PLAZA

CENTRAL AREA FROM SCENIC DRIVE

9. FEATURES

The approach to this Long Range Development Plan is based on the theory that appropriate, imaginative ideas of real three-dimensional improvements to the environment, even if not carried out literally, will prove more influential than abstract maps and land use regulations. Improvements in design will come through detailed study, and entirely new proposals should be considered, providing they actually offer improvements to the features suggested in the plan.

The great central plaza, rivalling the Piazza San Marco in scale, is referred to as the "communications center." A true center of the communicating arts, it would embrace communications through the written word in the central libraries, through speech and gesture in the auditorium and theatre arts center, through the visual arts in a gallery and museum, and through the administrative nerve center of the campus. It would include a TV and radio center, where large lecture halls, demonstration laboratories, and seminar rooms would be the source of closed and open-circuit TV and radio programs for the campus, the surrounding community, and the Statewide University. Large scale paving and ground cover designs at the University of Mexico have inspired the broad textures and patterns of the plaza.

At the center, a broad, shallow dish, 250 feet in diameter, will draw people to a gathering place which could accommodate as many as 6,000 students around an informal forum. From the center will arise a 360-foot communications tower designed in collaboration with Malcolm Leland, Consultant Sculptor.

The sculptured bronze-colored aluminum base, rising 220 feet, will contain an elevator, stair, and working platforms for electronic equipment. A mast above it will provide an aid to navigation, educational TV and FM, ship-to-shore local radio, a campus paging system, and micro-wave communication with other university campuses. Direct, inter-campus use of specialized computers and experiments such as those with laser light communication appear feasible. A bronze chime, sounding ships bells every half hour, is suggested as a tie to the traditions of the ship-oriented origin of the University in San Diego. Reflecting the light of a sunset for which the site is famous, it might also provide the focus for non-sectarian spiritual communication appropriate to the University.

Three other lesser communication towers are suggested to mark the centers of the three clusters of colleges. Replacing the obsolete radio installation on the Scripps Campus, each tower would serve a specialized purpose. The tower marking the first cluster, for instance, might mount a rotating antenna with which oceanographers send messages to their ships at sea as far away as the Indian Ocean. The center of the third cluster might be marked by radio receiving equipment and a low-power transmission web. Each of the three towers might contain a central receiving antenna serving all TV sets in the surrounding cluster through wiring in the tunnel system. Building these focal points in advance of development might have the compelling effect produced by the seven obelisks which appeared to make great things happen around them long after they were erected by Pope Sixtus V in Rome.

The central undergraduate library is indicated at the north side of the central plaza at a point where there is an abrupt change in grade, making feasible grade-level access to at least two stories. This location marks the south border of a prominent existing rectangular table of land, which is suggested as the site for the graduate library. The policy proposal illustrated by its design, is to use this dramatic site, fifty feet above Scenic Drive, overlooking the sea, for a great form that is at least as compelling as a Mayan Pyramid. If the graduate library is so designed, it is thought that each floor, surrounded by carrels, will offer access to a terrace overlooking the sea and the mountains. Seating space for 10% of the student body has been assumed in the plan to be located in college study halls which would contain standard library reference works, a print-out list of the library collection, and occasional loan collections of reserve books from the central library. Seats for 15% of the students and space for 2 million volumes are assumed to be accommodated in the central libraries.

Included in Pueblo Lands offered by the City to the University is an area of about 30 acres stretching west from Scenic Drive on the south border of the golf course to city-owned park land on the bluff overlooking the ocean. It is suggested that this be the site of a conference center, which would offer the idyllic environment found by other branches of the University at remote locations. A recreation center for the University as a whole, related to the beach and a natural picnic grove, might also be appropriate. If sufficient housing accommodations for conferences and visitors to the University are not provided conveniently elsewhere, this might be an excellent location for such a function.

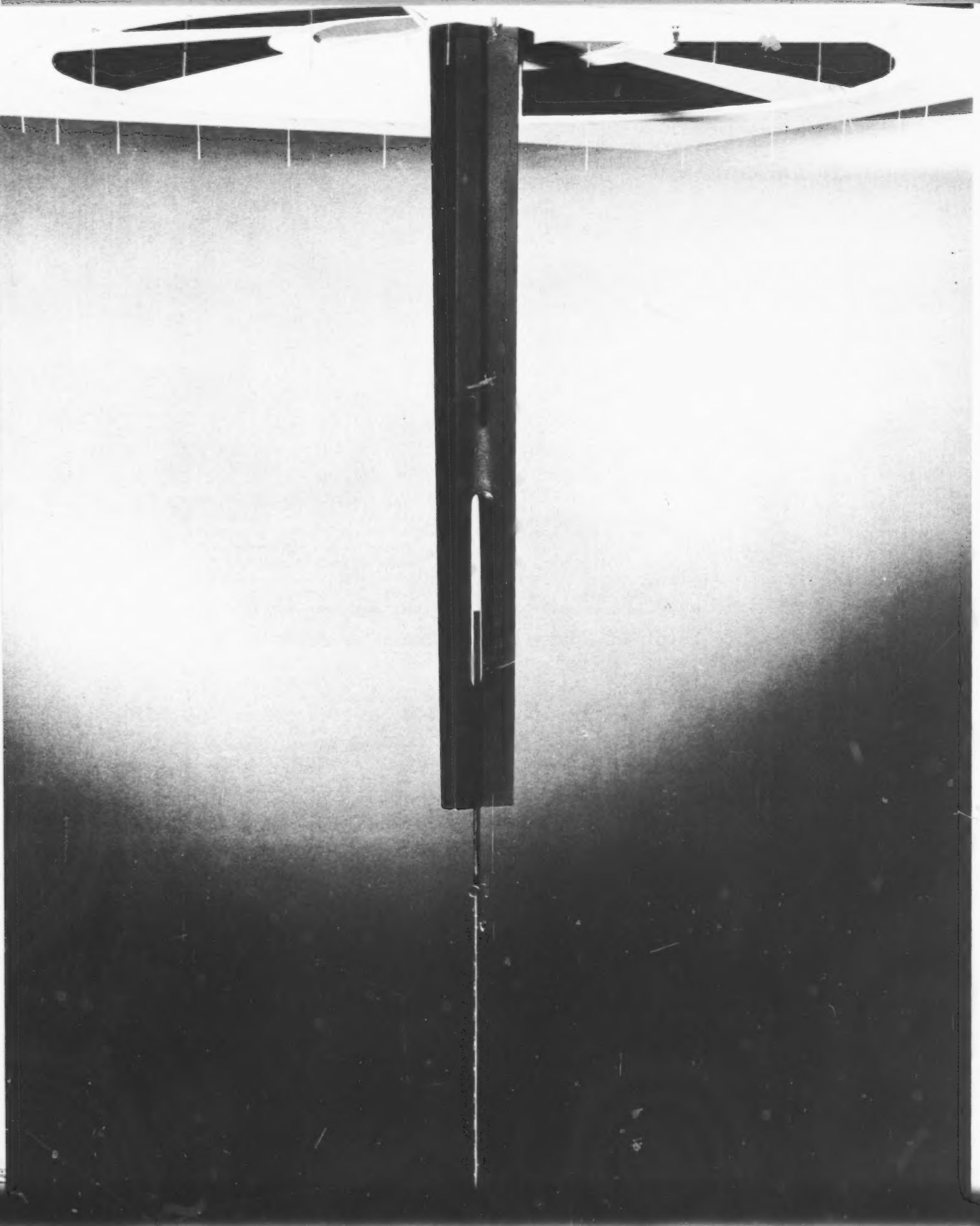
The form suggested for an arena on the east campus has led to the suggestion that this might be the first campus of the University boasting a bull ring. This facility is proposed not mainly for spectator sports, but as a place where virtually the entire campus population could meet at one time to hear the President of the United States, for instance, when he visits the campus. No separate or special parking is proposed for this facility, which is designed mainly for internal university use. At other campuses, large crowds enjoy walking from remote parking areas on festive occasions. It is assumed that large-scale spec-

tator-sports events will be conducted off-campus. The design assumes a partially excavated arena, with tunnel entrances at grade to mid-points in the seating areas.

It is proposed to introduce water into the environment in several ways. The six acre reclamation pond in Sorrento Canyon will be a beautiful foreground for the campus seen from Genesee Avenue. At the main campus entrance on Scenic Drive, spray ponds 800 feet long will terrace up the hill, to form an exciting foreground to the graduate library. Along the length of the "Champs Élysées" of San Diego, which slopes down about 60 feet from the center of the north cluster to the center of the south cluster, a system of narrow channels containing running water is proposed, similar to those developed in Persia, and carried by the Moors to the Generalife gardens, their summer palace above Granada. In an arid land, a small trickle of water is a welcome sound, and a tiny, splashing fountain is a delight. Small channels off the main stream might carry water downhill to quiet pools in each college court. This major pedestrian way, about half as long as the Champs Élysées itself, would be interrupted by a major change in grade at a dramatic stairway descending to the plaza from the north and by two open arcades crossing it, which would involve the visitor directly in an architectural experience. Another grand escalier is suggested on the east promenade to dramatize the 50-foot change in grade which occurs east of the plan center. Each stair would be supplemented by ramps.

In this age of complexity and motion, one is usually introduced to a campus by a sign or a disorganized complex of signs and symbols. It has become almost customary to develop a multi-million dollar investment with the greatest care, and then to cheapen its appearance by lack of attention to the graphic arts and to the incidental details such as trash receptacles, benches, electroliers, fire hydrants, and curb marking, sometimes called "campus furniture." Furthermore, time and money are wasted repeatedly by visitors and by staff members helping them, if directions are not clearly presented. A report on graphics and campus furniture, prepared by Frederick Usher-John Follis and Associates, treats this subject from the standpoint of the Long Range Development Plan. It is urgently recommended that a policy be adopted recognizing this field as being important and worthy of time, attention, and appropriate funds.

The Academic Plan has noted the importance of including fine arts within the campus environment. Fine arts can be incorporated as an intrinsic part of the design of building elements. Every effort will be made to integrate fine arts into building design at UCSD in this context. The incorporation of fine arts as independent examples of painting, sculpture, ceramics, and mosaics, should be controlled by sensitive and sophisticated people in this field. Many an architect has made strenuous efforts to introduce fine arts into the architectural environment, only to find the selection of the art or the artist decided on political or expedient grounds. It is recommended that a fine arts commission, consisting of people respected in the field, be established to stimulate and encourage the employment of distinguished examples of fine arts on the campus, to seek ways and means of obtaining them, and to maintain the quality of art on the campus at a high level.



APPENDICES:

Faculty and Student Body:
(Quoted from Academic Plan, February 1, 1963)

	Science & Technology	Social Sciences & Humanities	All Fields
Faculty FTE	290	290	580
Faculty Heads	405	405	810
Lower Division Students	1200	1100	2300
Upper Division Students	1800	1600	3400
Total undergraduate students	3000	2700	5700
Graduate students	2000	1500	3500
TOTAL STUDENTS	5000	4200	9200

These figures correspond to:

16.0	students/FTE, allowing for need of "stockpiling" faculty for a growing campus.
38.0	graduate students.
25.0	lower-division students.
37.0	upper-division students.
1.40	faculty heads / FTE

POSSIBLE ORIENTATION OF FOUR COLLEGES.

Each college might be divided into three or four divisions, each headed by a dean. In the following tabulation, we take the divisions to be science and technology, humanities and social sciences. It is desirable that, in each college, each division have a distinctive, though not excessive, leaning. (A possible leaning of a division of natural sciences is "earth sciences"). In this spirit, the following illustrations are concocted. Again, it must be emphasized that the following is more of an illustration of the general campus than a concrete plan. Other arrangements have been suggested, following the same general pattern.

Example Showing Some Similarities and Differences in Composition of Four Hypothetical Colleges. (Derived from Academic Plan, February 1963)

Faculty Strength by Campuswide Graduate Department in 1975:

	COLLEGE	FTE BY COLLEGE 1	2	3	4	TOTAL FTE
1.	Science and Technology					
	Mathematics	10	10	10		30
	Physics	15		15	10	40
	Chemistry	10			10	20
	Biochemistry		10		5	15
	Astronomy	10				10
	Biology I		10	15		25
	Biology II		10			10
	Oceanography				15	15
	Earth Sciences	10			10	20
	Applied Science/ Engineering I	15		10		25
	Applied Science/ Engineering II			20		20
	Applied Science/ Engineering III				20	20
	Basic Medical Sciences		55			55
	TOTAL	70	95	70	70	305
2.	Humanities					
	Fine Arts	5			5	10
	Drama	5	5			10
	Music	5	5			10
	English		10	15	10	35
	Linguistics and Languages	10	5	10	10	35
	Romance Literature		5	5		10
	Philosophy			5	5	10
	Classics				5	5
	TOTAL	25	30	35	35	125
3.	History	15		10	15	40
4.	Social Sciences					
	Economics	15	10	10		35
	Sociology	10			10	20
	Anthropology		10		10	20
	Psychology	15		10		25
	Political Science		10	10	5	25
	TOTAL	40	30	30	25	125
	FACULTY	150	155	145	145	595
	STUDENTS	2400	2400	2200	2200	9200

These figures reflect the belief that both sciences and the arts are to be especially emphasized. The average college will have 5 science, 4 humanities, 3 social sciences departments, and history. It may be noted that the average department has 10.5 FTEs and 14.7 heads, large enough for a strong and reasonably broad group.

SPACE ESTIMATED FOR "TYPICAL" COLLEGE UCSD FOR LONG RANGE PLANNING PURPOSES.

1 Staff F.T.E.	2 Subject Field	Div.	3 Students %	4 Classrms No. (A.S.F.)	5 Teach. Lab. (Table 33	6 Res. Lab. Revised 10/61	7 Res. Lab. A.S.F.)	8 Acad. Of. (Table 34	9 Adm. Of. Restudy)	10 Subtotal 4,5,6,7,8,9	11 Shops, etc. Table 34	12 Total ASF 10 + 11	13 State GSF 1.75 x 12	14 Non-State .4 x (7+8+9) +7+ Shops	15 Non-State GSF	16 Total GSF
5	Arts	LD	25	215	1125	-							(Non-St.FTE)	540		
		UD	30	250	1950	-							(P.D.Fellows)	500		3.8%
		GR	20	140	-	2800							(Shops, etc.)	104		
		TOTAL	3.3	75	605	3075	2800	500	700	150	7830	783	8613	15100	1144	2000	17100
15	Engineering	LD		-	-	-	-								3120		
		UD		125	1250	14400	-								4500		25.5%
		GR		125	360		25000								1140		
		TOTAL	10.9	250	1610	14400	25000	4500	2400	900	48810	7321	56131	98200	8760	15300	113500
10	Mathematics	LD		60	770	-	-								880		
		UD		65	825	-	-								600		3.5%
		GR		75	950	-	2250								74		
		TOTAL	8.7	200	2545	-	2250	600	1300	300	6995	350	7345	12850	1554	2720	15570
20	Biological Science	LD		120	1055	4200	-								3360		
		UD		120	1150	5400	-								5000		21.0%
		GR		130	300	-	20800								836		
		TOTAL	16.1	370	2505	9600	20800	5000	2400	1000	41305	4130	45435	77500	9196	16050	93550
25	Physical Science	LD		120	1260	4200	-								4200		
		UD		140	1500	7000	-								6250		27.2%
		GR		170	390	-	27200								1045		
		TOTAL	18.7	430	3150	11200	27200	6250	3000	1250	52050	5205	57255	100200	11495	20100	120300
70	Social Science	LD		250	3125	1000	-								5600		
	(incl.Lang.& Lit.)	UD		370	4525	740	-								2800		19.0%
		GR		355	4010	-	10650								420		
		TOTAL	42.3	975	11660	1740	10650	2800	9100	2100	38050	1902	39952	69300	8820	15400	84700
145	Total Academic	LD		575													
		UD		850													100. %
		GR		875													
		TOTAL	100.	2300	22075	40015	88700	19650	18900	5700	195040	19691	214731	373150	40969	71570	444720
	% Total A.S.F.(12)			10.3		18.6	41.3	9.1	8.8	2.7		9.2	100.		19.0		
	Study Hall (3 ASF/S)		2300				69.0						6900				12075
	General Services		2300										40000				70000
	Residence Halls		800										101320				156000
																	685445
	TOTAL "TYPICAL" COLLEGE		2300														

1 through 4 - Academic Plan, February 1, 1963
5 through 12 - Derived from Restudy Standards by Architect
13 through 16 - Estimated by Architect

SUMMARY OF SPACE ESTIMATES
TOTAL UNIVERSITY OF CALIFORNIA, SAN DIEGO CAMPUS

	ASF/ FTE	FTE NO. STUD.	ASF	GSF
"TYPICAL COLLEGE: (SPACE ASSUMED FOR PLANNING PURPOSES)				
Academic	121.0	2,300	278,153	486,195
Gen. Services & 800 St. Res. Hall	61.0	2,300	141,320	226,000
Total	182.0	2,300	419,473	712,195
FOUR COLLEGE CLUSTER:				
Colleges	182.0	9,200	1,677,892	2,848,780
Intramural P.E.	3.0	9,200	27,600	48,300
Military Sciences	1.0	9,200	9,200	16,100
Total	186.0	9,200	1,714,692	2,913,180
UNIVERSITY:				
Three Clusters	186.0	27,500	5,115,000	8,730,000
Central Libraries	10.0	27,500	275,000	412,500
Central P.E.	3.0	"	82,500	123,750
Offices Gen. Admin.	2.7	"	74,250	130,000
Auditorium - Theatre	.6	"	16,500	30,000
Corp. Yd. & Mech. Bldgs.	3.7	"	100,000	150,000
Grad. Stud. Apts. for 1600 Fam.	24.2	"	666,000	1,000,000
Total	230.2	"	6,329,250	10,576,250
MEDICAL SCHOOL:				
College of Medicine	500.0	400	200,000	350,000
O.P. Clinic & Services			66,000	115,500
500 Bed Hospital @ 510 ASF/Bed			255,000	446,250
Student Health	2.2	27,500	60,500	105,000
Total			581,500	1,016,750
TOTAL Except other Institutes			6,910,750	11,593,000
SUMMARY:				
Academic Only			3,337,836	5,834,340
Central Services			628,374	1,029,910
College of Medicine			581,500	1,016,750
Housing & General Services			2,363,040	3,712,000
TOTAL Except Institutes			6,910,750	11,593,000

ASSUMPTIONS:

1. General:

   a) There will be 12 Colleges of 2300 students each in addition to a college of medicine of 400 students.
   b) Each college may vary as much as 10% from the normal population.
   c) Including 15% non-state space, each college will contain 475,000 G.S.F. academic space including an average of about 120,000 G.S.F. each for engineering, biological science, physical science, and social science - humanities.
   d) Students will take at least 2/3 of their classes in one college and the remaining 1/3 or less in other colleges. A cluster of four colleges will offer a comprehensive undergraduate curriculum capable of satisfying virtually any undergraduate program.
   e) 75% of the library space will be centralized and 25% distributed to Colleges.
   f) 50% of the physical education building space will be centralized and 50% distributed in three clusters for intramural use.
   g) Military science space will be distributed in three clusters.
   h) General campus administration, museums, galleries, and a large auditorium will be centralized.
   i) Each college will include housing for 800 students and a general services building including cafeteria for residents and non-residents. (Policy is to house one quarter. For space planning, 50% is assumed throughout.)
   j) Graduate student apartments will be located outside the academic campus, convenient to schools and shopping.

2. Land and Building Criteria:

   a) Under-graduate academic building height will be four stories maximum (three stories plus basement). Graduate space will be acceptable on upper floors. Average building height is assumed to be four stories plus basement.
   b) Maximum building coverage: 20% of land, plus parking.
   c) Housing: 200 students per acre, not including parking.
   d) Parking: 120 cars per acre.
   e) Recreation area: 2-2/3 acres per college plus 2 acres per cluster plus 35 acres centralized.

3. Parking:

		Space/Person
a)	Resident single students	1:2
b)	Married students	1:1
c)	Faculty	1:1
d)	Commuting Students	1:2
e)	Commuting Staff	1:2
f)	Visitors (10% of total above)	1:1
g)	Assume 75% of personnel on campus at one time	

4. Time - Distance:

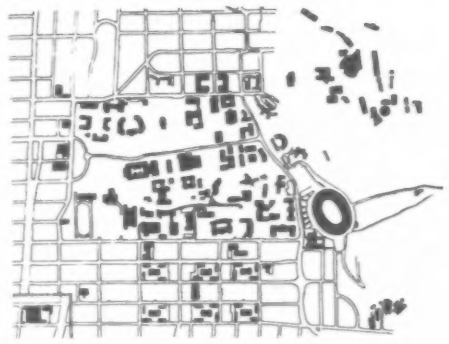
   a) 275' per minute walking time.
   b) One-half minute each for entering class, leaving class, and ascending or descending one-story height.
   c) 10 minute class break.
   d) Parking for faculty and staff, 4 minutes maximum from office.
   e) Parking for others, 10 minutes maximum from destination.

UNIVERSITY OF CALIFORNIA, SAN DIEGO
AVAILABLE LAND

Parcel	Description	Unit	Gross Area	Net Buildable	Net if "H" is Filled	West Campus Net Usable
A	CITY LAND (W of La Jolla Scenic Dr.)	Acres	30.017	28		
B	CITY LAND (W of Freeway) (N of Old Miramar)		378.933	270		270
C	CITY LAND (E of Scripps Hosp)		14.529	30		
E	CITY LAND (@ Old Miramar & 101)		32.980	32		32
	SUB-TOTAL		456.459	360		
F	UNIVERSITY LAND (S.S.& E.)		62.750	58		58
G	CAMP MATTHEWS (W of Freeway)		180.230	132		132
H1	CAMP MATTHEWS (N of New Miramar)		162.280	115	160	
H2	CAMP MATTHEWS (S of New Miramar)		54.140	40		
	SUB-TOTAL		459.400	345	425	
	Univ. has option to buy:					
D	CITY LAND (S of Parcel "C")		25.402	25		
K	CITY LAND (E of Parcel "D")		4.370	4		
L	CITY LAND (S of S.S.& E.)		8.622	8		8
	UNIVERSITY LAND (S.I.O.)		170.000	86		
	GRAND TOTAL		1124.253	828	870	
J	CAMP MATTHEWS (S of New Miramar) (Not suitable for Univ.)		41.085	30		
	TOTAL OWNED, PLEDGED & OPTIONED		1165.338	858		500

ESTIMATE OF LAND REQUIREMENTS FOR A CAMPUS OF 27,500 STUDENTS - BASED ON UCSD ASSUMED CRITERIA
(MODIFIED REGENTS' NEW CAMPUS LOCATION CRITERIA)

	ACRES	
ACADEMIC STRUCTURES		
Assume 200 SF Gross/Student		
Assume 4-Story Bldgs. @ 20% Coverage		
27,500 x 200 GSF/St. = 5,500,000 SF		
Ground Coverage 1,375,000 SF		
1,375,000 SF x 5 ÷ 43,560 SF/Acre	160	
RESIDENT SINGLE-STUDENT HOUSING		
Assume 2/3 of 1/2 total students		
1/2 x 27,500 = 13,750 x 2/3 = 9150		
Assume 200 students/Acre	46	
PARKING		
Assume 9150 single students @ 1.57 st/car		
Assume 1600 faculty (1:17 total students) @ 1:1		
9150 ÷ 1.57 = 5825 + 1600 = 7425 cars		
7425 cars @ 150/Acre	50	
ATHLETIC & RECREATIONAL	44	
ON CAMPUS SUB-TOTAL		300
GRADUATE TEACHING & RESEARCH	110	
MARRIED STUDENT HOUSING		
Assume 4600 units (1/3 of 1/2 total)		
2300 (no children) @ 36/Ac. = 64 Ac.		
2300 (2 children) @ 17/Ac. = 136 Ac.	200	
PARKING		
4600 Married Students @ 1:1 = 4600		
13750 Commuting Stud. @ 1:2 = 6875		
3200 Commuting Staff @ 1:2 = 1600		
13075 cars @ 150/Ac.	87	
ATHLETIC FACILITIES	44	
SERVICE FACILITIES	28	
OFF-CAMPUS SUB-TOTAL		469
TOTAL		769



UNIVERSITY OF CALIFORNIA AT BERKELEY

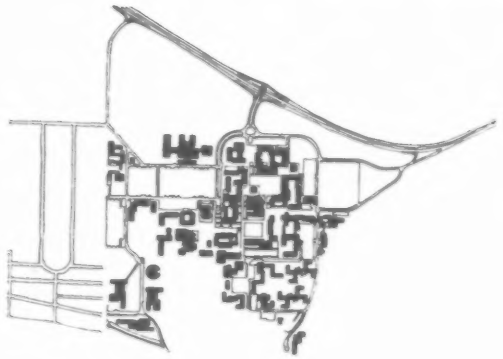
L. R. D. P. - 27,500 STUDENTS

UNIVERSITY OF CALIFORNIA AT SAN DIEGO

L. R. D. P. - 27,500 STUDENTS

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

L. R. D. P. - 27,500 STUDENTS



UNIVERSITY OF CALIFORNIA AT SANTA BARBARA

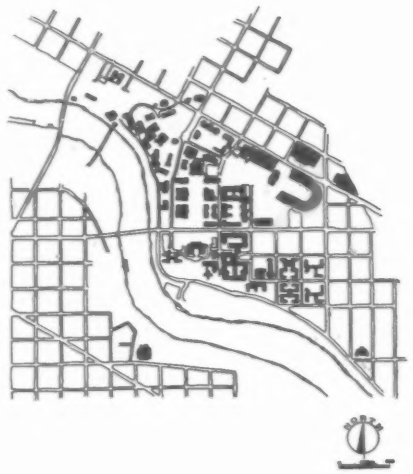
L. R. D. P. - 10,000 STUDENTS

UNIVERSITY OF CALIFORNIA AT DAVIS

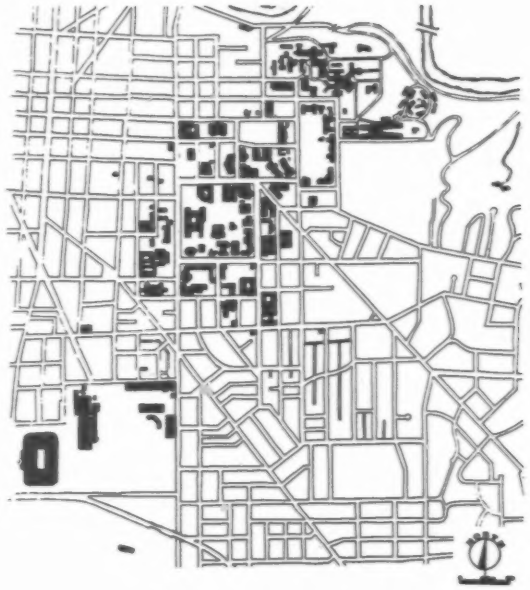
L. R. D. P. - 15,000 STUDENTS

UNIVERSITY OF CALIFORNIA AT RIVERSIDE

L. R. D. P. - 10,000 STUDENTS



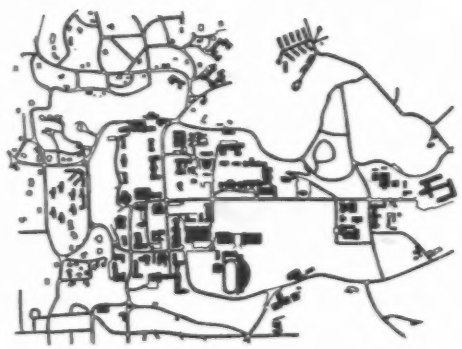
UNIVERSITY OF MINNESOTA
CAMPUS PLAN - 26,786 STUDENTS



UNIVERSITY OF MICHIGAN
CAMPUS PLAN - 24,633 STUDENTS

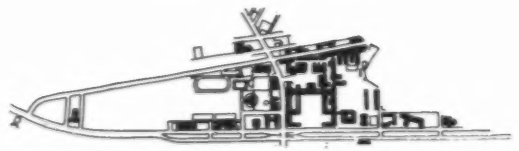
OHIO STATE UNIVERSITY
L. R. D. P. - 25,500 STUDENTS

HARVARD UNIVERSITY
CAMPUS PLAN - 10,240 STUDENTS

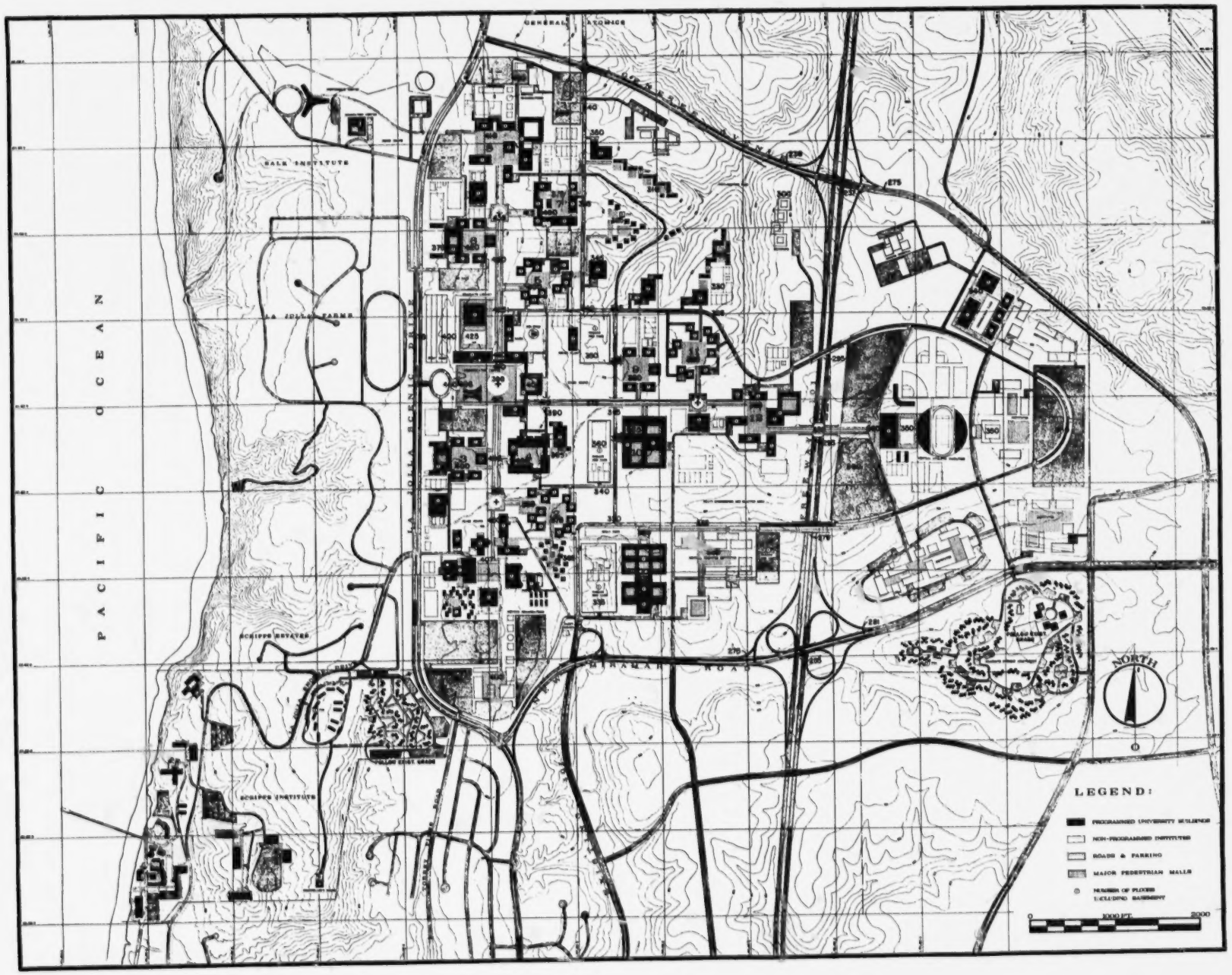


CORNELL UNIVERSITY
CAMPUS PLAN - 11,000 STUDENTS

PRINCETON UNIVERSITY
CAMPUS PLAN - 3,955 STUDENTS



MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMPUS PLAN - 6,000 STUDENTS



UNIVERSITY OF CALIFORNIA SAN DIEGO

LONG RANGE DEVELOPMENT PLAN

ROBERT E. ALEXANDER & ASSOCIATES ARCHITECTS & PLANNING CONSULTANTS · DEC. 10, 1962

42

APPROXIMATE BASIC GRADES

AUTOMOBILE PARKING
UNIVERSITY OF CALIFORNIA, SAN DIEGO

CATEGORY	NUMBER	RATIO	SPACES	PROVIDED
Resident Single Student	6,350	1 2	3,175	
" Married "	1,750	1 1	1,750	
Faculty	2,260	1 1	2,260	
Commuting Students	19,400	1 2	9,700	
" Staff	7,500	1 2	3,750	
TOTAL	37,260		20,635	
Visitors 10% Spaces			2,065	
TOTAL			22,700	
Less 25% Diversity			5,700	
Spaces required - Gen. Campus			17,000	16,800
College of Medicine			4,500	5,000
TOTAL SPACES REQUIRED			21,500	21,800

SPACES PROVIDED:	PROGRAM	RESERVE	TOTAL
West Campus Lots	5,850		
" " Garages	6,100		
East " Lots	2,500		
" M.S.A. Housing	1,150		
West " "	600		
Misc. at Buildings	600		
TOTAL	16,800		
COLLEGE OF MEDICINE	5,000		21,800
S.I.O.	800	450	
Other Institutes		2,400	
TOTAL	22,600	2,850	25,450

ESTIMATE OF LAND REQUIREMENTS
Athletic & Recreational Facilities
UNIVERSITY OF CALIFORNIA, SAN DIEGO

ITEM	No.	Unit AREA	University 27,500 ST	Group 9,166 ST	College 2,500 ST	Sub-T for Univ.
Archery: Men	6	0.03		0.06		0.18
Women	6	0.02		0.04		0.12
Basketball	11	0.18			0.18	1.98
Volleyball: Men	11	0.13			0.13	1.43
Women (Note A)	0					
Hockey	3	1.72		1.72	[illegible]	5.16
Tennis	44	0.17			68	7.48
	6	0.17	1.02			1.02
Bleachers for Tennis	6	0.19	1.14			1.14
Swimming Pool: Men	3	0.18		0.18		54
Women	3	0.18		0.18		54
Baseball	3	5.78	17.34			17.34
Softball: Men (w/bleachers)						
(Note B) Men (no ")						
Women(no ")						
Football-Track (w/bleachers)	1	5.78	5.78			5.78
Track & Field	1	4.06	4.06			4.06
Football practice field	4	1.45	5.80			5.80
Touch football field	11	1.60			1.60	17.60
(Note C)						
Handball	22	0.02			04	44
Horseshoes	22	0.01			02	22
Sub Total			35.14	2.18	2.65	70.83
Stadium (Note D)			150.00			150.00
TOTAL			185.14			220.83

NOTE A Women's volleyball included in indoor space; multiple use with indoor basketball courts.
B Use alternates seasonally with fields for touch football.
C Use alternates seasonally with fields for softball; larger unit area to permit softball use.
D If large seating capacity coliseum is required, an additional 150 acres should be added for facility and supporting parking.

LAND USE
UNIVERSITY OF CALIFORNIA, SAN DIEGO

LONG RANGE DEVELOPMENT PLAN

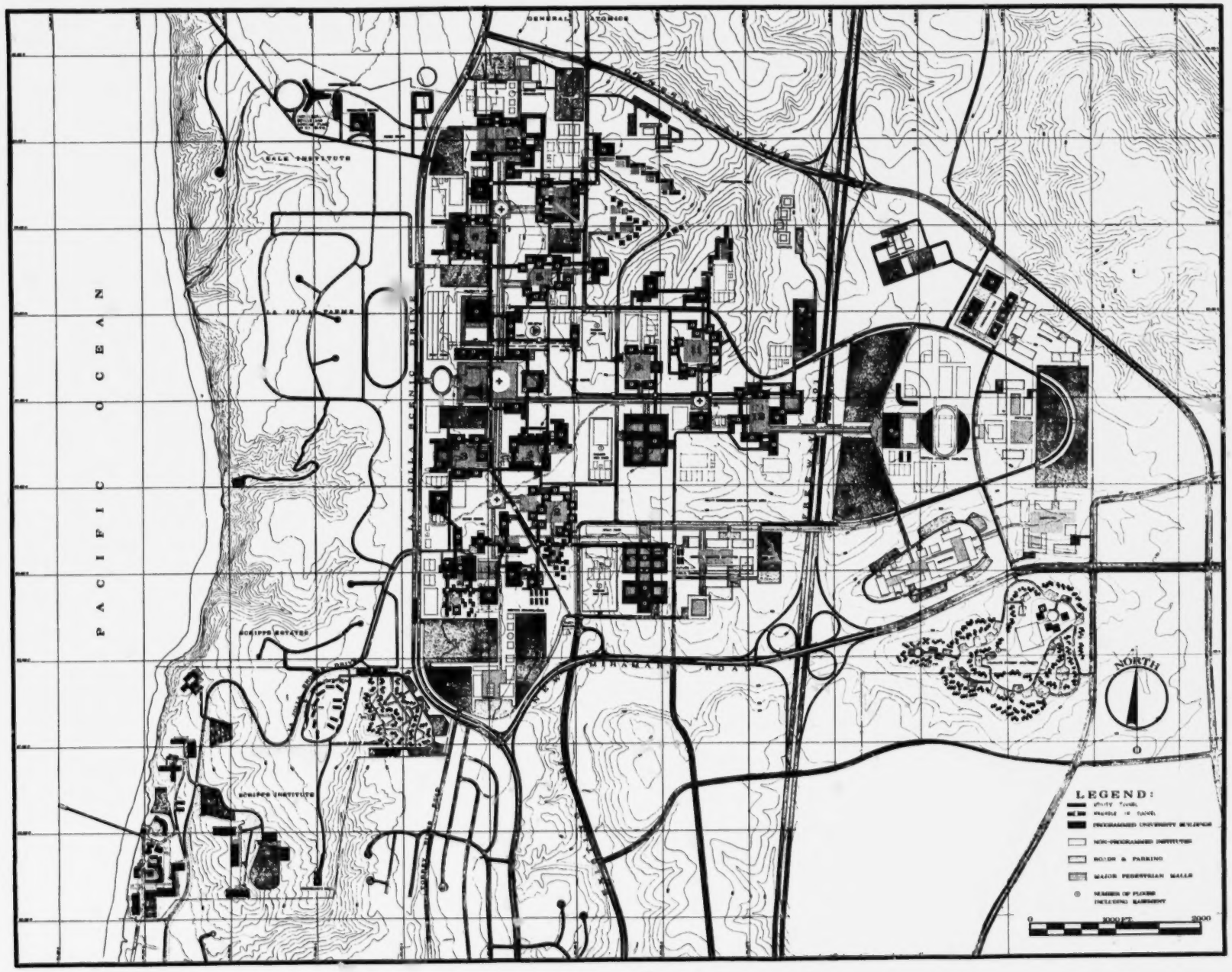
	GSF	AVE. HT.	% COVER	ACRES REQ.	ACRES AVAILABLE
TYPICAL COLLEGE:					
Academic	480,000	5	20	11.0	
Gen. Services	70,000	2	20	4.0	
Residence Halls - 800 St.	156,000	4	20	4.5	
Recreation 2.65 Ac. + 13%				3.0	
TOTAL TYPICAL COLLEGE	706,000			22.5	
Four Colleges	2,824,000			90.0	
Intramural P.E. & Mil.Sc.	64,400	1.5	20	5.0	
Recreation 2.18 Ac. + 15%				2.5	
General Campus Mall				2.5	
TOTAL TYPICAL CLUSTER	2,888,400			100.0	
Three Clusters	8,700,000			300.0	
Central Facilities	572,500	4	20	22.0	
Reserve-Galleries, etc. 100%	572,500	4	20	22.0	
College of Medicine	1,000,000	4	20	28.0	
Med. Expansion 100%	1,000,000	4	20	28.0	
TOTAL ACADEMIC & RES.	11,845,000			400.0	
Parking Lots - 7000 @ 120/A				58.0	
3 Story Garages - 9000 @ 360/A	3,300,000	3	100	25.0	
South Reserve - Service Organiza-				8.0	
North Reserve - " " tions				4.0	
Reserve for Institutes	700,000	5	20	5.0	
GENERAL WEST CAMPUS	15,845,000			500.0	500.0
Univ. P.E.	123,750	1.5	20	10.0	
Athletic Areas 35.14 Ac. + 14%				40.0	
Arena (Net) 30,000 Cap.	127,000	1	30	10.0	
Corporation Yard	150,000	1.5	25	10.0	
Parking Lots - 5400 @ 120/A				45.0	
Reserve for Institutes	2,400,000	5	20	55.0	
GENERAL EAST CAMPUS	2,800,750			170.0	170.0
Married Stud. Apts 900 @ 36/A	562,500			25.0	
" " " 100 @ 17/A	62,500			6.0	
Parking Lots - 1000 @ 120/A				9.0	
TOTAL EAST HOUSING SITE	625,000			40.0	40.0

LONG RANGE DEVELOPMENT PLAN

	GSF	AVE. HT.	% COVER	ACRES REQ.	ACRES AVAILABLE
GENERAL WEST CAMPUS	15,845,000			500.0	500.0
GENERAL EAST CAMPUS	2,800,750			170.0	170.0
EAST HOUSING SITE	625,000			40.0	40.0
Married Stud. Apts.500 @ 36/A	312,500			14.0	
" " " 100 @ 17/A	62,500			6.0	
Parking Lots 600 @ 150/A				4.0	
WEST HOUSING SITE	375,000			24.0	24.0
S.I.O. Academic (Incl. Reserve)	724,117	4	20	21.0	
Parking Lots 2080 @ 120/A				17.0	
Reserve for Institutes	312,000	4	20	16.0	
Parking " " 960 @ 120/A				8.0	
SIO SITE				62.0	62.0
Conference and Rec. Center	244,000	1	20	28.0	28.0
TOTAL CAMPUS	20,925,867			825.0	825.0

SUMMARY

Academic incl. Med.	182.0	
Res. Halls & Gen. Services	163.0	
Recreation incl. P.E. & Mil. Sc.	126.0	
Parking 20,000 cars	116.0	
Parking Reserve - 6040	50.0	
Reserve Incl. S.I.O.	149.0	
Conference Center Reserve	28.0	
Commercial Reserve	11.0	
TOTAL LAND USE	825.0	825.0
UNUSED LAND (Steep & Canyons)		
Conference Center		1.57
S.I.O.		84.00
West Campus		162.55
East Campus		50.91
TOTAL UNUSED		299.03
TOTAL LAND		1,124.03
PARCEL J TO BE TRADED		39.85

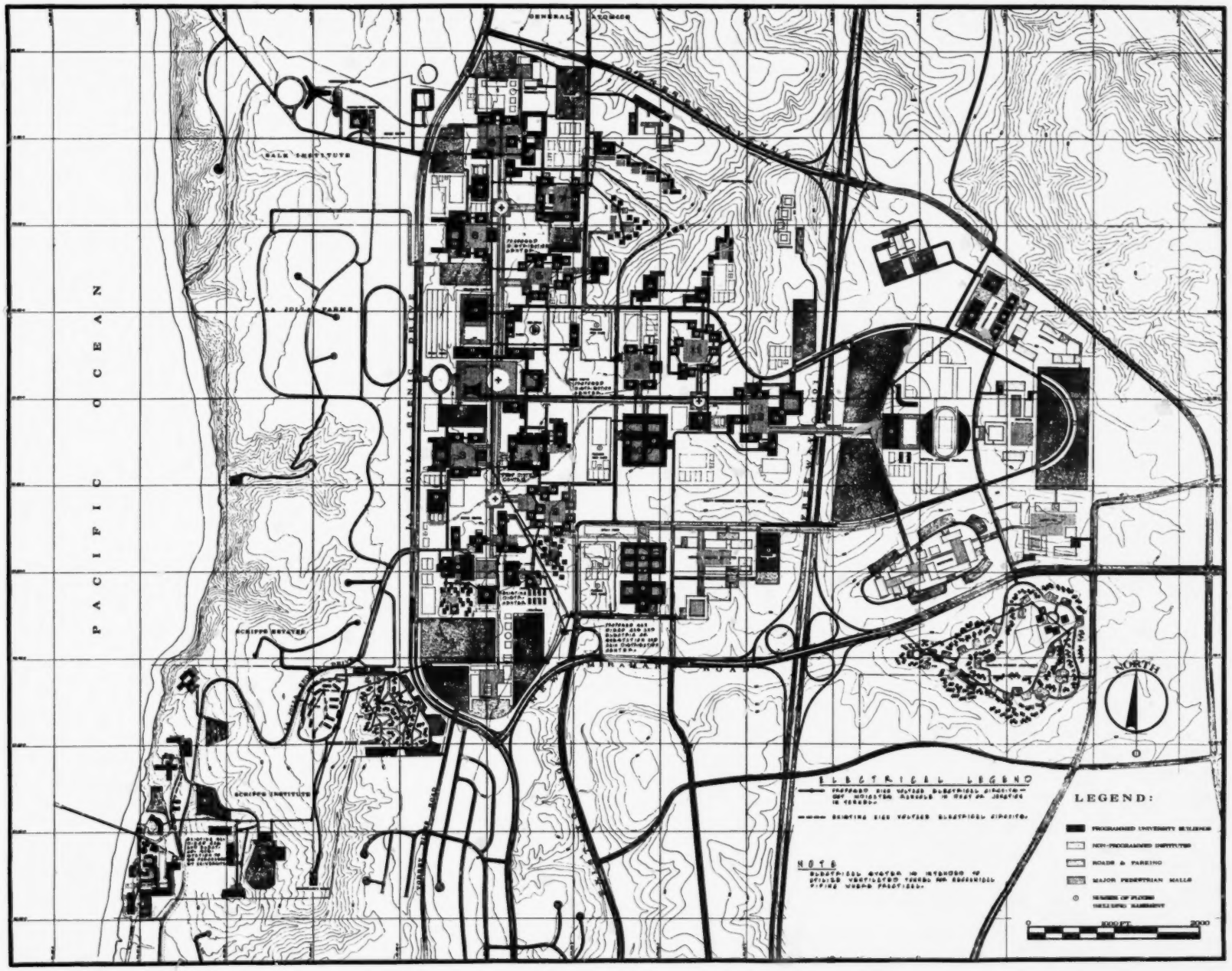


UNIVERSITY OF CALIFORNIA SAN DIEGO

LONG RANGE DEVELOPMENT PLAN

ROBERT E. ALEXANDER & ASSOCIATES ARCHITECTS & PLANNING CONSULTANTS FEB. 14, 1963

HEATING & COOLING DISTRIBUTION BORIS M. LEMOS, MECHANICAL CONSULTANT



UNIVERSITY OF CALIFORNIA SAN DIEGO
LONG RANGE DEVELOPMENT PLAN

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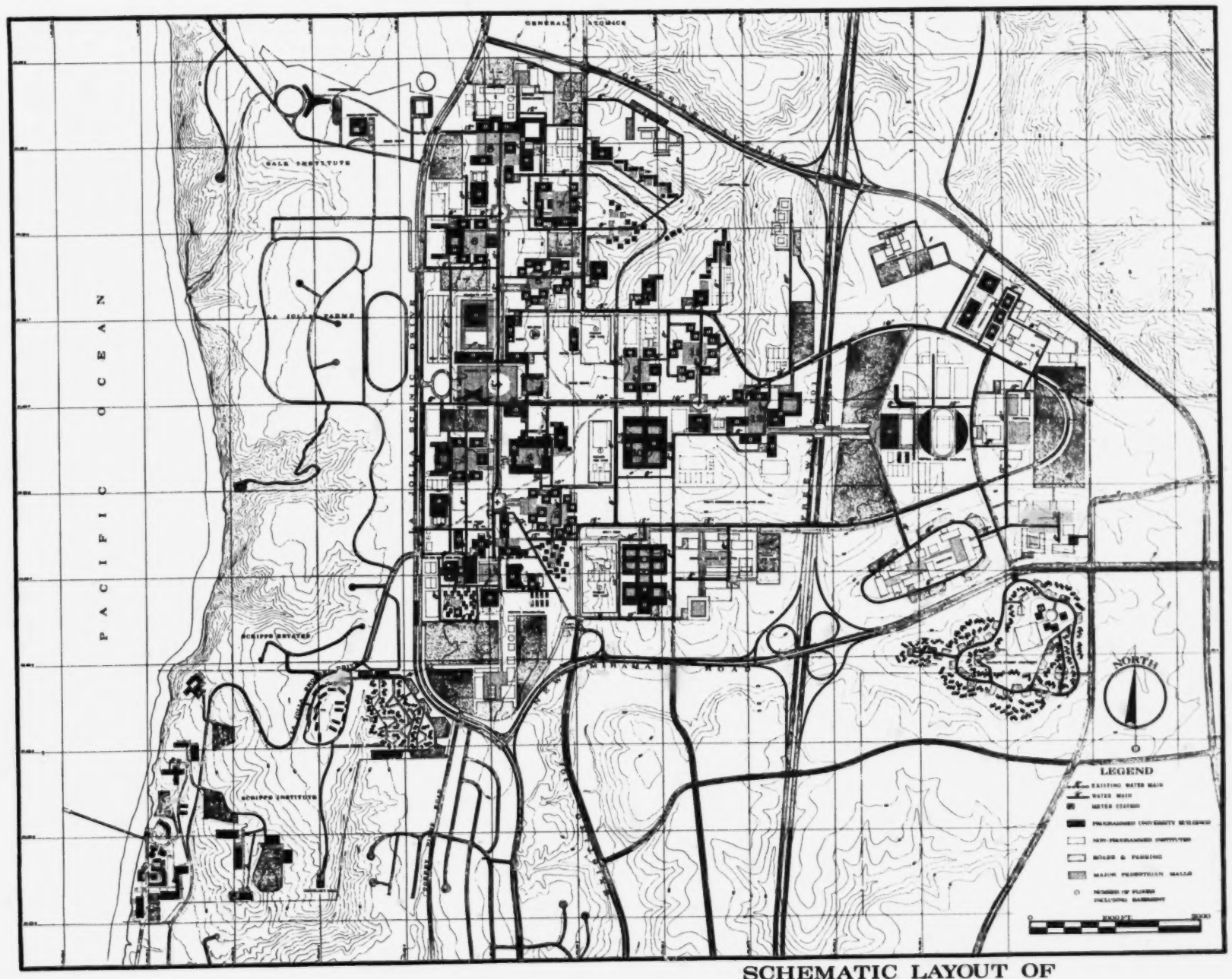
46 **ELECTRICAL DISTRIBUTION** FRUMHOFF & COHEN, ELECTRICAL CONSULTANTS



SCHEMATIC LAYOUT OF
WATER SYSTEM

UNIVERSITY OF CALIFORNIA SAN DIEGO

LONG RANGE DEVELOPMENT PLAN

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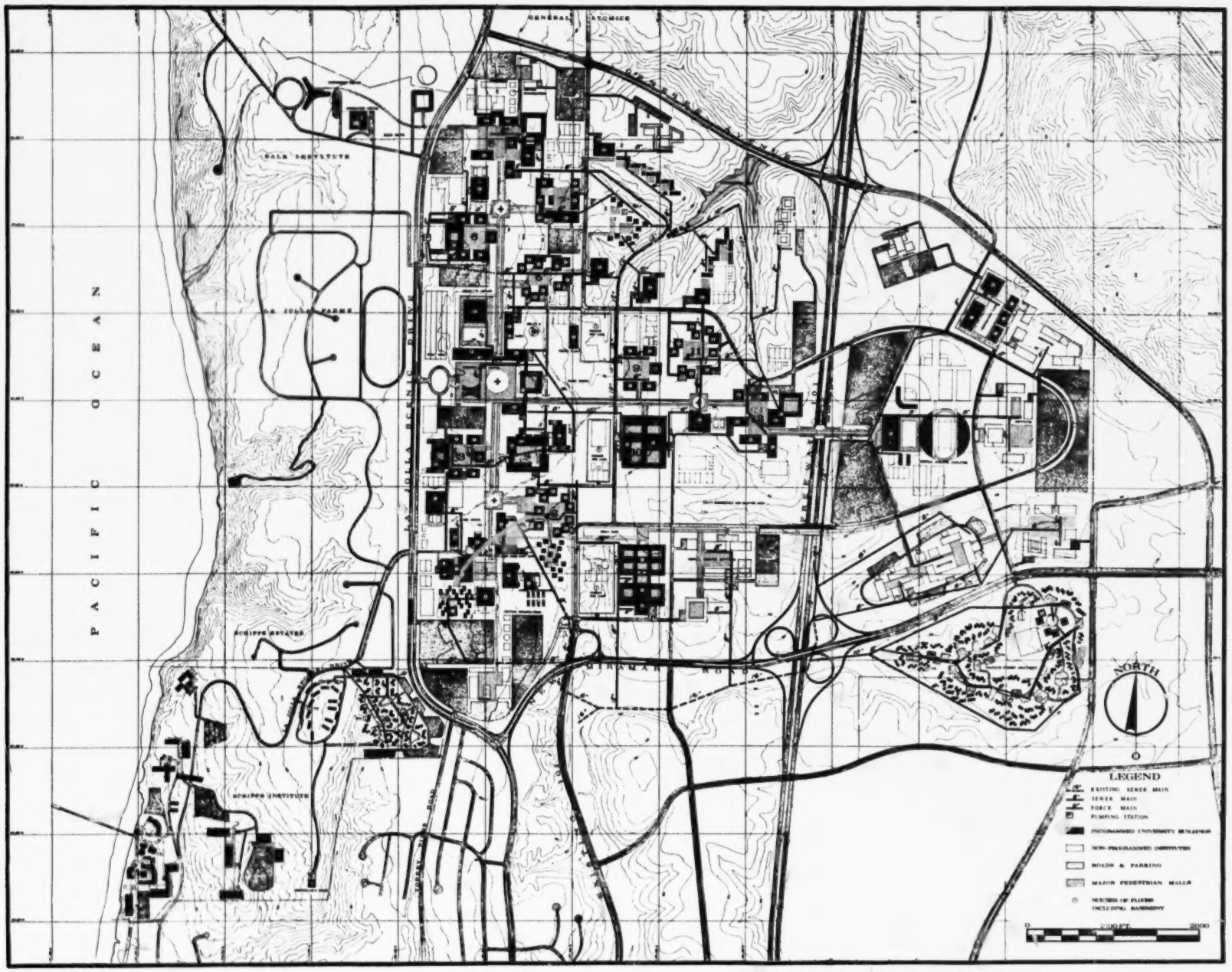
BOYLE ENGINEERING ..... CONSULTING ENGINEERS



SCHEMATIC LAYOUT OF
SEWER SYSTEM

UNIVERSITY OF CALIFORNIA SAN DIEGO
LONG RANGE DEVELOPMENT PLAN

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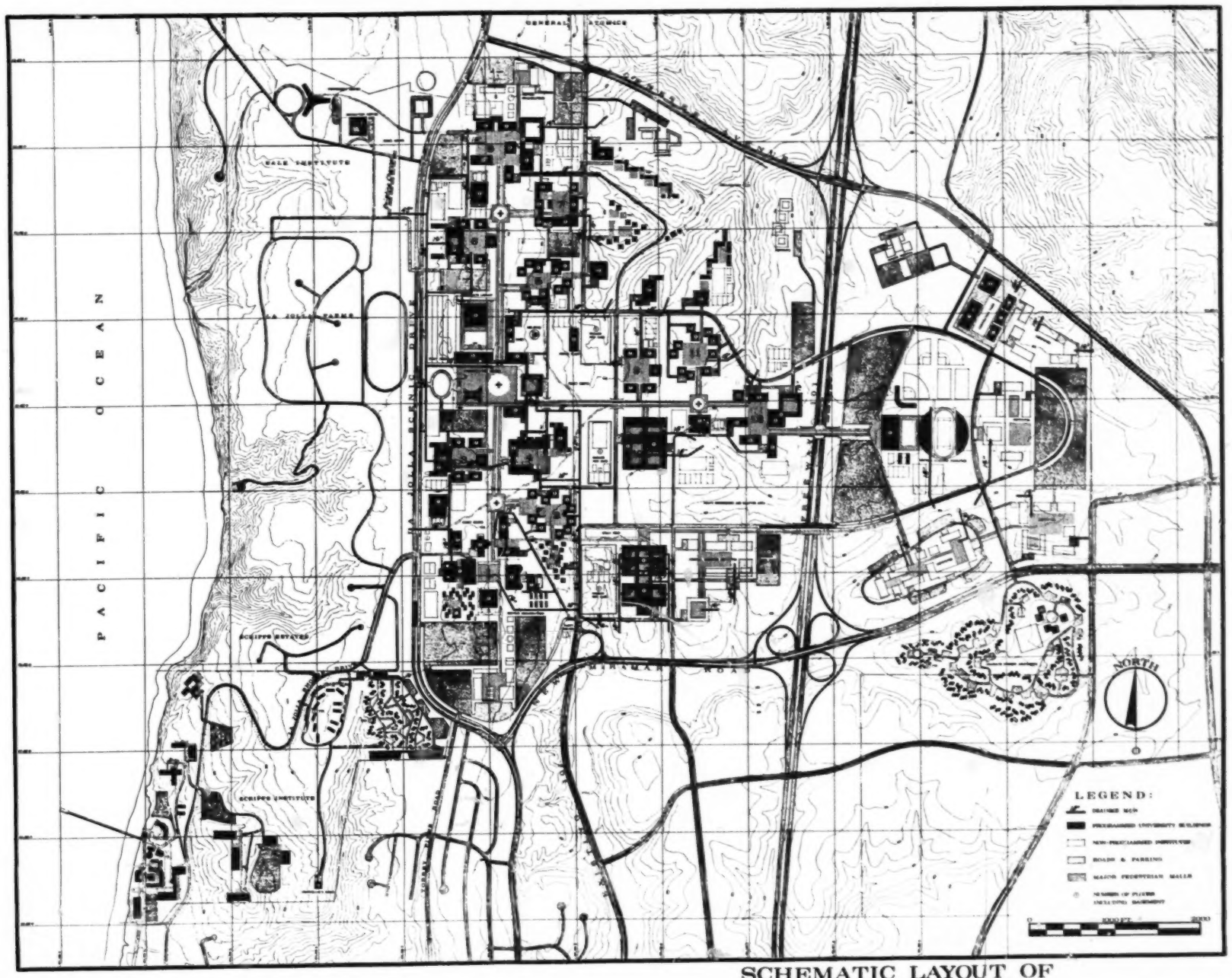
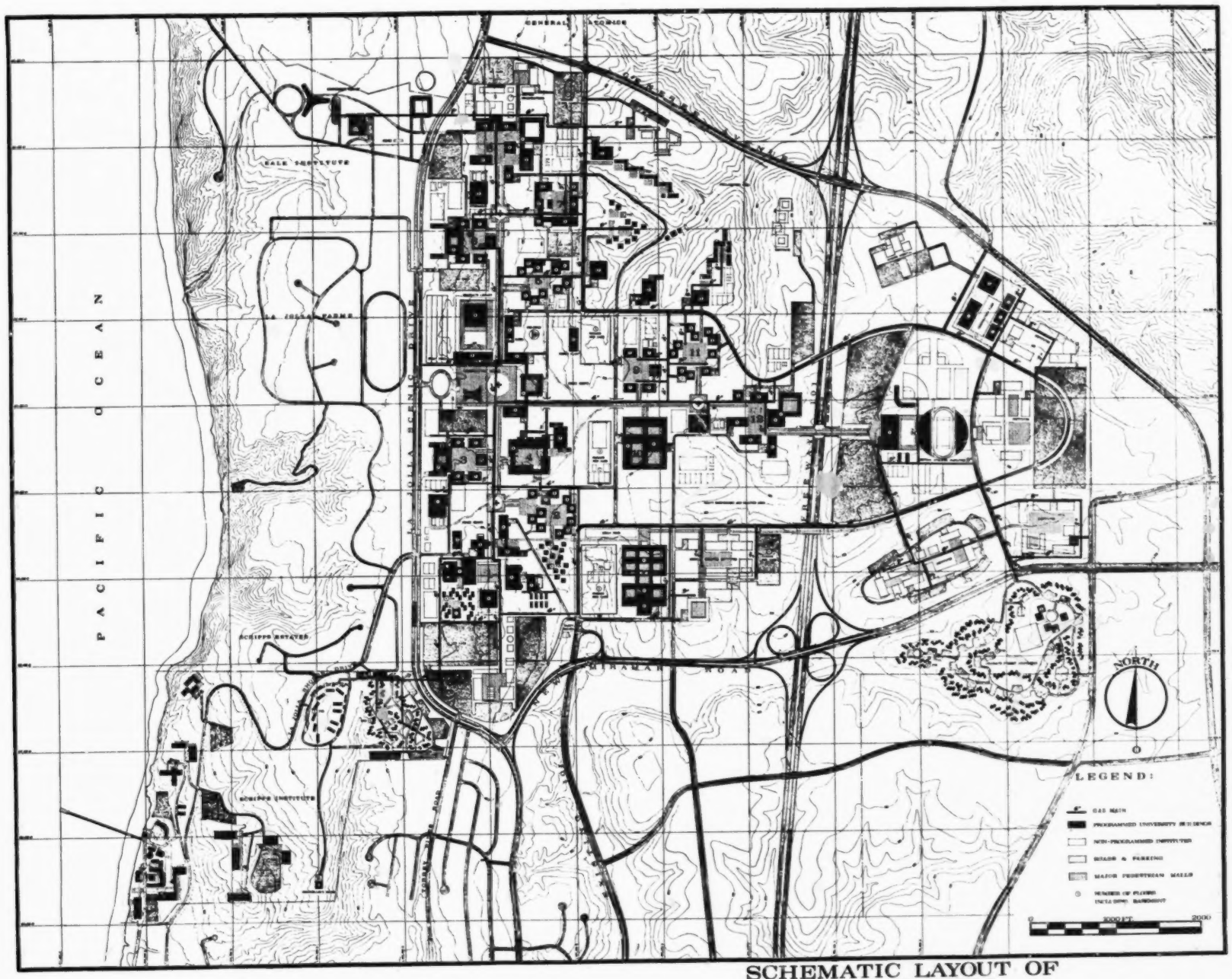


SCHEMATIC LAYOUT OF
DRAINAGE SYSTEM

UNIVERSITY OF CALIFORNIA SAN DIEGO
LONG RANGE DEVELOPMENT PLAN

ROBERT E. ALEXANDER & ASSOCIATES ARCHITECTS & PLANNING CONSULTANTS - FEB. 11, 1963
BOYLE ENGINEERING ..... CONSULTING ENGINEERS



SCHEMATIC LAYOUT OF
GAS SYSTEM

UNIVERSITY OF CALIFORNIA SAN DIEGO
LONG RANGE DEVELOPMENT PLAN

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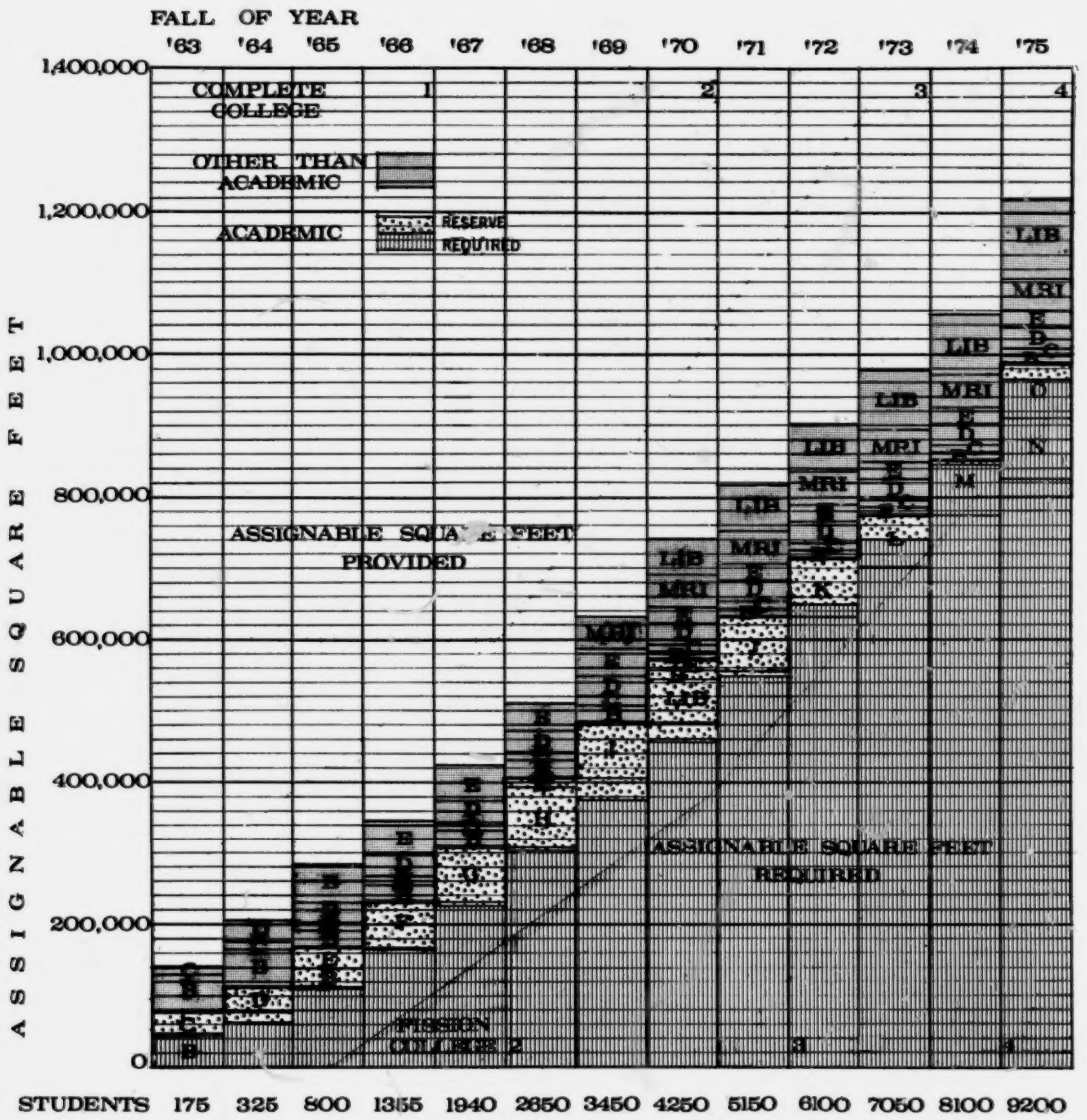
UCSD ACADEMIC A.S.F. REQUIRED TO SATISFY ESTIMATED GROWTH

Colleges #2,3 and 4 Planned to Accommodate 2300 Students each (232,000 a.s.f.) - Trimester Plan

1 Student Enrollment for Year Occupied		2 Project	3 Year Occupied	4 Building A.S.F.	5 Non-Academic A.S.F.	6 Academic A.S.F.	7 Cumulative Academic A.S.F. Available	8. Cum. A.S.F. Restudy Space Yr of Occupancy	9. Cum.A.S.F. State Funded Spon.Res.Space	10. Additional 30,000 A.S.F. Growth Space	11. Study Hall Space per College	12. Cum.A.S.F. Total Space Required	13. Cumulative Non-State A.S.F. Available	14. Non-State A.S.F. Required
		AVERAGE AREA PER STUDENT:						94.32	6.35		3.0			17.85
175	College 1	Building B	63	87000	51300	35700								
		Building C	63	53200	10900	42300	78000	16500	1100	30000		47600	10900	3100
325		Building D	64	65000	29400	35600	113600	30600	2100	30000		62700	40300	5800
800		Building E	65	78000	50000	28000								
		Acad.Incr.Bldg.B (Bldg.E & Matthews)	65			26800	168400	75700	5100	30000		110800		14300
1355		Building F	66	63300		63300	231700	127800	8600	30000		166400		24200
1940		Building G	67	77400		77400	309100	183000	12300	30000		225300		34600
2650	College 2	Building H (include study hall)	68	84200		84200								
		Acad. Incr.Bldg.E (Med.Lib)	68			11000	404300	249000	16800	30000	6900	302700		47300
3450		Building I	69	77300		77300								
		Materials Res.Inst.	69		45000		481600	325000	21900	30000		376900	85300	61600
4250		Library	70	110000	50000	60000								
		Acad.Incr.Bldg.B (Library)	70			12500								
		Acad.Incr.Bldg.E (Library)	70			16000	570100	400900	27000	30000		457900		75900
5150	College 3	Building J	71	77400		77400								
		Acad.Decrease in Library	71			-15000	632500	485000	32700	30000		547700		91900
6100		Building K (include study hall)	72	84200		84200	716700	575000	38700	30000	6900	650600		108900
7050		Building L	73	77300		77300								
		Acad.Decrease in Library	73			-20000	774000	665000	44800	30000		739800		125800
8100	College 4	Building M	74	77400		77400	851400	764000	51400	30000		845400		144600
9200		Building N (include study hall)	75	84200		84200								
		Building O	75	77300		77300								
		Acad. Decrease in Lib.	75			-25000	987900	868000	58400	30000	6900	963300		164200

NOTE: This chart was prepared by the Architect with the assistance of the A & E office. Buildings in College 1 are actual areas. Other "Buildings" are increments projected to satisfy estimated growth for master planning purposes.



ASSIGNABLE SQUARE FEET REQUIRED TO BE SCHEDULED FOR ACADEMIC USES TO SATISFY ESTIMATED GROWTH

(RESTUDY STANDARDS + 3 A.S.F./ST. COLLEGE STUDY HALL = 121 A.S.F./ST.)

(BUILDING SHOWN YEAR OCCUPIED)

UNIVERSITY OF CALIFORNIA SAN DIEGO

CAMPUS BUILDINGS - UCSD

I. EXISTING

Structure	Year Completed	Addition	Approx. Gross Sq.Ft.	Architect
Building A	1963		12,240	Risley and Gould
Building B	1963		148,181	Risley and Gould
Building C	1963		106,633	Risley and Gould
Experimental Aquarium	1958		2,300	Frank L.Hope & Assoc.
Institute of Geophysics and Planetary Physics	1963		37,423	Lloyd Ruocco
Library (S.I.O.)	1916	1961	11,906	Wheeler & Halley
Pier Buildings			460	
Residential Apartments	1962		71,990	Mosher & Drew
Ritter Hall	1931			Louis J. Gill
		1956		Frank L.Hope & Assoc.
		1960	85,487	Frank L.Hope & Assoc.
Scripps Building (new)	1959		9,533	Risley and Gould
Seawater Conversion and Core Storage Facility	1961		6,075	Risley and Gould
Sumner Auditorium	1960		5,410	Risley and Gould
Sverdrup Hall	1960		61,731	Risley and Gould
Vaughan Aquarium-Museum	1951		14,410	Frank L.Hope & Assoc.

II. UNDER CONSTRUCTION

Building D	1964		115,000	Risley, Gould & Van Heuklyn

III. PLANNING STAGE 1963

Building E	1965		107,000	Deems-Martin
Building F	1966		100,000	Neptune-Thomas
Equipment Whse Building	1964		4,000	Liebhardt & Weston
Experimental Aquarium		1964	2,406	Office of Arch. & Eng.
Gen'l Services & Cafe.Bldg.	1965		41,000	R.E.Alexander
Hydraulic Laboratory	1964		18,185	Frank L.Hope & Assoc.
Physiological Research Lab.	1964		11,500	Aetron
Res. Hall, Unit I	1965		82,000	R.E.Alexander

CAMPUS BUILDINGS - UCSD (Cont'd)

IV. TO BE DEMOLISHED

Structure	Year Completed	Addition	Approx. Gross Sq.Ft.
B.T.Storage			164
Corporation Yd.Complex:			
Buildings & Grounds	1950		3,498
North Garage	1950		1,435
West Garage	1950		4,044
Purchasing - Storehouse	1953	1962	4,402
Geodesic Domes			930
Radio Buildings	1952		1,942
Res. Support Shop	1960		7,140
Ritter Res. Yard			1,200
Scripps Bldg. (old)	1908		6,980
Storage Bldg.	1954		2,700
TB's 1 - 4	1948		6,202
TB's 4 - 8	1915		2,986
TB 8 -	1960		1,800
TB 16	1915		2,676
TB 16A			240
TB 21 - 24	1917		3,021
TB 25			1,494
TB 28	1915		1,742
TB 30			1,310
TB 31	1915		1,306

MEMBERS OF CAMPUS PLANNING COMMITTEE - SAN DIEGO
for all, or a portion, of the period from July 1, 1961 to June 30, 1963

Dr. Herbert York	Chancellor and Chairman
Mr. Robert E. Alexander	Consulting Architect
Dr. J.R. Arnold	Acting Dean, School of Science and Engineering
Dr. D.M. Bonner	Acting Dean, School of Science and Engineering
Dr. K.A. Brueckner	Dean, School of Science and Engineering (The First College)
Mr. J.H. Clark	Assistant Chancellor - Business and Finance
Mr. K.H. Drummond	Assistant to Chancellor
Dr. Carl Eckart	Chairman, Educational Policy Committee
Mr. J.W.Hutchison	Administrator, Central Services
Dr. Joseph Mayer	Vice Chairman, Academic Senate
*Mr. Elmo Morgan	Vice President - Business (Statewide)
Dr. F.N. Spiess	Acting Director, Scripps Institution of Oceanography
Mr. J.W.Tippetts	Building Program Coordinator and Executive Secretary
Mr. J.V. Watters	Planning Analyst
Mrs. Harriet Wimmer and Mr. Joseph Yamada	Consulting Landscape Architects

*Alternates for Mr. Morgan:

Mr. R.J.Evans	University Architect (Statewide)
Mr. A.R. Wagner	University Planner (Statewide)

CONSULTANTS FOR LONG RANGE DEVELOPMENT PLAN

Architects and Planners	Robert E. Alexander, F.A.I.A. & Associates
* Landscape Architects	Wimmer & Yamada, Inc.
*Civil Engineers	Boyle Engineering
Structural Engineers	Parker, Zehnder & Associates
*Mechanical Engineer	Boris Lemos
*Electrical Engineers	Frumhoff & Cohen
*Soils Mechanics Engineers	LeRoy Crandall & Associates
*Agronomists	Eugene L. Begg
*Traffic Engineers	Allen M. Voorhees & Associates, Inc.
*Graphic Consultants	Frederick Usher - John Follis & Associates
Sculptural Consultant	Malcolm Leland
Delineators	Benton & O'Dowd
*Retail Market Analysts	Real Estate Research Corporation

* L.R.D.P. Reports by these consultants are on file.